
UNIT 1 CONCEPT OF DEVELOPMENT, GROWTH AND DEVELOPMENT, LIFE SPAN PERSPECTIVE, METHODS OF STUDYING DEVELOPMENT AND CHARACTERISTICS OF DEVELOPMENT

Structure

- 1.0 Introduction
- 1.1 Objectives
- 1.2 Concept of Development
 - 1.2.1 Goals of Development Changes
- 1.3 Growth and Development
 - 1.3.1 Critical Period During Development
- 1.4 Life Span Perspectives
 - 1.4.1 Understanding Life Span Development
 - 1.4.2 Issues in Life Span Development.
 - 1.4.3 Stages of Human Development
 - 1.4.4 Domains of Human Development
- 1.5 Characteristics of Life Span Development
- 1.6 Facts of Development
- 1.7 Research Methods for Life Span Development
- 1.8 Obstacles in Studying Life Span Development
- 1.9 Let Us Sum Up
- 1.10 Unit End Questions
- 1.11 Suggested Readings and References
- 1.12 Answer to Self Assessment Questions

1.0 INTRODUCTION

From the moment the human child is first conceived, to the day the individual dies, they keep changing constantly and developing. While some of the changes humans undergo are as a result of chance incidents and personal choices, the vast majority of life changes and stages the human passes through are due to certain common biological and psychological factors partly inherited and partly environmental and are shared by all people.

Development refers to the biological and psychological changes that occur in human beings between birth and the end of adolescent, as the individual progresses from dependency to increasing autonomy. Because these developmental changes may be

Prenatal, Infancy and Early Childhood

strongly influenced by the genetic and environmental factors during prenatal life and these are the part of the study of child development. Developmental change may occur as a result of genetically-controlled processes known as maturation, or as a result of environmental factors and learning, but most commonly involves an interaction between the two. Developmental psychology refers to development throughout the lifespan, and pediatrics, the branch of medicine relating to the care of children.

In this unit we are also going to introduce the concept of life span development. It deals with important developmental stages that human beings go through birth, infancy, adolescence, adulthood, old age and death. As the humans grow up from one stage to another stage they learn to make use of their body parts, learn how to express themselves and communicate with persons, learn how to maintain relationship with others and how to love and care for others. In this unit we will be focusing on the concept of development, issues and stages. In development of humans, and then put forward the concept of life span development, and its characteristics and theories of child development.

1.1 OBJECTIVES

After go through this unit, you will be able to:

- define the concept of human development;
- describe about the growth and development;
- explain life span perspectives;
- explain the significant issues involved in the process of human development;
- identify the stages and important domains of development;
- analyse the characteristic features of life span development; and
- explain the research methods and its obstacles in studying the life span.

1.2 CONCEPT OF DEVELOPMENT

Development describes the growth of humans throughout the lifespan, from conception to death. It refers to development as patterns of change over time. It does not just involve the biological and physical aspects of growth, but also the cognitive and social aspects related to the development. The scientific study of human development seeks to understand and explain how and why people change throughout life. This field examines change across a broad range of topics including motor skills and other psycho physiological processes. Cognitive development refers to the areas of problem solving, moral understanding, conceptual understanding, language acquisition, social, personality, and emotional development, and self-concept and identity formation. Growth is defined as an increase in size. In other words development is defined as a progression towards maturity. Even though development is a continuous process with competencies developing, then disappearing, only to appear at a later age, it is not continuous in the sense that it increases constantly but rather in a series of waves with whole segments of development reoccurring repetitively. For example, new borns walk, if held, and then this ability disappears only to reappear at eight or ten months of age.

1.2.1 Goals of Development Changes

The goal of development is to enable people to adapt to the environment in which they live. Self actualisation is essential to achieve these changes. It plays an important

role in mental health; people who make good personal and social adjustment must have opportunities to express their interest and desires in ways that give them satisfaction but, at the same time, conform to accepted standards. Lack of these opportunities will result in frustrations and generally negative attitudes towards people and life in general.

1.3 GROWTH AND DEVELOPMENT

Growth refers to the development of children from birth to adolescence. From newborns to teenagers, parents often have questions if their children are developing normally. WHO is also coordinating an international effort to develop child growth standards for infants and young children (age 0-5 years). There is a process of child development, which makes a growth curve. Growth curve is defined as a statistical curve derived from plotting weight and height against chronological age for comparing an individual child's growth pattern with the average age of growth. In short we can say that personality is influenced by many factors and these factors are involved in the development of the personality of a child.

The strongest factor in the process of development of personality is society and the child's experiences in the society and in the environment. Most of the children's learning comes from the society, their surroundings and their experiences. Although these experiences are supervised by the parents and teachers, more often they occur in spontaneous family or neighborhood settings. As such one finds that every child is different from the other. Another factor that influences personality is the cultural factors. Through everything from music, television, and incidental remarks overheard but hardly understood by the child to deliberate modeling and training, the child is encouraged to embody the typical or ideal personality of her culture.

Place is the third factor which is involved in the development of a child, in addition to the biological factor. As children grow up from one stage to another, they learn to make use of their body parts, learn how to express themselves and communicate with others. They also learn to form relationship with others, how to care for others, how to love and how to work.

Over the years, people who study children have created theories to explain how children develop. While these theorists realise that every child is special and grow in his or her unique way, they also have recognised that there are general patterns that children tend to follow as they grow up, and these patterns have been documented by the theorists. Also there are four areas in which children's growth and development take place and these are discussed below.

- i) **Physical:** Physical growth is perhaps the most obvious. Children grow in height and weight over the years and their appearance changes to a great extent during puberty. Children also develop certain physical abilities during their progression towards adulthood, including crawling, walking, running and (possibly) writing. Their motor coordination becomes well refined and they can shoot across a target relatively more accurately.
- ii) **Psychological and cognitive:** Children also develop psychologically and cognitively as their brains absorb more information and they learn how to use that information. Literally, children have to learn how to think on purpose and to process or organise all the information that comes to them from the environment. They must learn how to solve problems, to talk, and to complete mental tasks such as remembering telephone numbers or using computers.

- iii) **Social and emotional:** Children grow socially and emotionally. They learn how to interact, play, work, and live with other people such as family, friends, teachers, and employers. They learn how to understand both their own feelings and that of others' emotions. They also learn ways of dealing with strong emotions. In order to function well as independent adults, children must develop a sense of self-esteem as they go through the long process of figuring out what shape their identity will take. They develop a sense of morality as they learn the difference between right and wrong.
- iv) **Sexuality and gender identity:** Children also develop sexually and form a gender identity. This development is unique because it spans developments across the other physical, psychological, and social channels. Early on, children learn how their bodies work and look and what it means to be a boy or a girl; they learn how boys and girls are different. As they grow older and enter adolescence and puberty, they continue to learn how their bodies work sexually and how to responsibly handle their sexuality so as to balance their sexual desires and appropriate behaviour. They continue to decide for themselves what it means to be masculine or feminine throughout their lifespan.

Different theorists have come to different conclusions concerning how exactly children develop across the various developmental channels. Some theorists believe that children develop smoothly and continuously, but other theorists believe that children develop more discretely in a series of stages, each of which is fairly stable.

1.3.1 Critical Periods During Development

There are certain periods of development known as difficult periods or critical periods. It is said that children who do not get special stimulation during their time of receptivity may get stuck at this period. For instance children learn to trust the parents if parents are consistently loving, affectionate and give the child care and love unconditionally. In such cases the child learns to trust its parent and from then onwards other adults in the environment.

However if the child is neglected and abused, not given the care, affection and love, he or she may develop distrust of parents and this distrust will be transferred to other adults in the environment. It must be remembered that even though the child's development may have been adversely affected, if he or she is given an opportunity to be with foster parents who care and love the child, the latter develops the capacity to trust other adults too in course of time.

1.4 LIFE SPAN PERSPECTIVES

Life span refers to the ongoing process that we go through while growing up. It is the period of time from conception extending to death. Studying life span development is very important because it helps in describing and explaining the mysteries of human development. Life span development includes issues such as the extent to which development occurs through the gradual accumulation of knowledge versus stage like development, or the extent to which children are born with innate mental structures versus learning through experience. Many researchers are interested in the interaction between personal characteristics, the individual's behaviour, and environmental factors including social context, and their impact on development.

The scientific study of development is important not only to psychology, but also to sociology, education, and health care. By better understanding how and why people change and grow, one can then apply this knowledge to helping people live up to their full potential. Life span development is defined as the pattern of change that

begins at conception and continues through the life cycle.

Lifespan development can also be defined as a methodical, intra-individual change associated with progressions corresponding to age. The development progresses in a manner implicating the level of functioning.

Life-span developmental psychology is the field of psychology which involves the examination of both constancy and change in human behaviour across the entire life span, that is, from conception to death (Baltes, 1987). Development occurs in different domains, such as the biological (changes in our physical being), social (changes in our social relationships), emotional (changes in our emotional understanding and experiences), and cognitive (changes in our thought processes). Some developmental psychologists prefer to restrict the notion of development only to changes which lead to qualitative reorganisation in the structure of a behaviour, skill or ability (Crain, 2000).

Lifespan development is a process in which the progression initiates with the emergence of a fetus from a one celled organism. As the unborn child enters the world, the environment in which the child exists begins to influence the child's development (Educational Foundation, 2001).

The developmental periods are child and adolescence, early adulthood, middle adulthood and late adulthood. The transition in each of the developmental periods, involves a necessary change in the character of the individual's life and sometime this takes up to six years to complete the change (Smith, 2009).

The transition deals with the common developmental stages that human beings pass through: birth, infancy, adolescent, adulthood, old age and death.

1.4.1 Understanding Life Span Development

Human development is a multidisciplinary study of how people change and how they remain the same overtime. It reflects the complexity and uniqueness of each person and their experiences as well as commonalities and patterns across people. There are four interactive forces that combine to shape human development and these are given below:

- i) *Biological forces* include all genetic and health related factors that influence the development of a child. They provide raw materials (in case of genetics) and set boundary conditions (in the case of one's health) for development. Prenatal development, brain maturation, puberty, menopause, facial expression and change in cardio-vascular functioning, diet, and exercises are the some example of biological forces.
- ii) *Psychological forces* include all internal perceptual, cognitive, emotional and personality factors that affect the development of a child. Intelligence, self confidence, honesty and self esteem are examples of psychological factors.
- iii) *Socio-cultural forces* include interpersonal, societal, cultural and ethical factors that affect the development of a child. This is important to know that how people and environment interact with each other. The family, peers, coworkers and social institutions and culture influence development. Poverty is the example for socio cultural forces.
- iv) *Life cycle forces* reflect differences in how the same event affects people of different ages. Each individual is a product of a unique combination of these forces. No two individuals even in the same family experience these forces in the same way.

1.4.2 Issues in Life Span Development

Life issues are common problems, issues and/or crises that happen to normal people living normal lives. Examples include managing one's relationships so that they are healthy and functional, surviving disabilities, coping with grief, loss and self-esteem issues. A number of major issues have emerged in the study of human development.

These issues include the following:

Is development due more to genetics or environment?

Does development occur slowly and smoothly, or do changes happen in stages?

Do early childhood experiences have the greatest impact on development, or are later events equally important?

- i) **Continuity and Discontinuity:** The question of whether development is solely and evenly continuous, or whether it is marked by age-specific periods. Developmental Psychologists who advocate the continuous model describe development as a relatively smooth process, without sharp or distinct stages, through which an individual must pass.

That is, development is conceived of as a process of the gradual accumulation of a behaviour, skill, or knowledge. In contrast, those who hold to the second view would suggest that developmental change is best characterised as discontinuous in nature.

They describe development as a series of discrete stages, each of which is characterised by what had gone on in the past and how well the child was able to master the developmental tasks of that period etc. These theorists suggest that behaviours or skills often change qualitatively across time, and that new organisations of behaviours, skills, or knowledge emerge in a rather abrupt or discrete fashion.

- ii) **Stability and Change:** Another issue which is of importance to developmental psychologists is the issue of stability versus change. The question here is whether development is best characterised by stability, for example, does a behaviour or trait such as shyness stay stable in its expression over time or change. To cite an example: Could a person's degree of shyness fluctuate across the life span?
- iii) **Nature vs. Nurture:** Whether the behaviour ultimately developed by the child is due to hereditary factors or environmental factors. This issue is of great importance to psychologists. The debate over the relative contributions of inheritance and the environment is one of the oldest issues in both philosophy and psychology.

This debate concerns the relative degree to which heredity and learning affect the behaviour of the individual. Both genetic traits and environmental circumstances are involved in an individual's development, although the amount of influence the two has is not clearly evident. In fact it may be stated that the individual and his or her circumstances decide how much of the behaviour is influenced by heredity factors and how much by environmental factors. Today, most psychologists believe that it is an interaction between these two forces that causes development. Some aspects of development are distinctly biological, such as sexual development during puberty. However, the onset of puberty can be affected by environmental factors such as diet and nutrition.

1.4.3 Stages of Development

Often, developmental stages are defined by milestones. The term milestone refers to the development that has to take place according to the age of the child. For instance, almost all children start standing and walking at the age of 1 year and more, start saying a few words by the time they are one and half to two years etc. That a developmental stage has been successfully passed is indicated by the child mastering the developmental tasks of the particular period of development. Often, special milestones mark children's accomplishments, such as walking in infancy and entering school in early childhood, and these milestones can help mark children's movement inside and between developmental stages.

Individuals pass various stages throughout their life. There are systematic progressions in a certain order through a series of phases. Step by step they move closer to some form of adult status. This movement can be seen as involving changes in intellectual and physical powers (Example, changes in intelligence, expertise and ability to reason) and the impact of life events and experiences.

The main developmental periods of a human being are:

- i) Childhood and adolescence {birth to age 20 (early childhood transition by age 03)}
- ii) Early adulthood (age 17 to 45)
- iii) Middle adulthood (age 40 to 65)
- iv) Late adulthood (over 60 years of age) (*Tennat and Pogson, 1995*)

1.4.4 Domains of Human Development

The domains of development are categories used by scientists. The categories include physical, cognitive and social domains which all characterise human development. The physical domain is characterised by how humans grow and change physically, at all stages of development especially during childhood and adolescence. When the physical changes are maximum, this domain includes how humans view the world as development progresses as a result of physical development and interactions.

Psychological domain focuses on adjustment of the individual to the environment. Adjustment is the process which is essential for survival of the organism. The child has to learn to suck, ingest food, eliminate, breath on own, eliminate on own etc, which activities were taken care of when the child was still within the mother's womb.

Adjustment also is required as the child grows up to learn to eat on own, eliminate as is required and not as the child wishes. The child has to learn to talk, walk, express, communicate and so on. All these adjustments are again necessary if the child has to survive.

Adjustment to self, others and environment are important tasks which become increasingly complex as the child grows up, and which all the child has to master and accomplish. Success leads to healthy adjustment while failure leads to maladjustment. Adjustments in the way the world is viewed as the body develops are also included in this domain.

Cognitive domain focuses on learning, attention, perception and memory etc. The manner in which learning takes place and how the child makes progress in school

Prenatal, Infancy and Early Childhood

and home are of great importance in the child's growth and development. How these components of cognitive domain functions and improves indicate the progress the child makes. The social domain deals with the adjustment to people that are with others and learn the right ways of interactions. The cognitive domain is concerned with how learning occurs and why memory deteriorates during old age. The social domain contains adjustment in variables within social situations such as personality research, social skills and developing relationships. All the domains operate together and are affected by each other (Boyd & Bee, 2006).

Self Assessment Questions

State whether the statement is *True or False*.

- 1) Changes occur from conception to death. ()
- 2) Children's learning come from the society, his surroundings and his experiences. ()
- 3) There are four areas in which children grow. ()
- 4) Two interactive forces that combine to shape human development. ()
- 5) Two interactive forces that combine to shape human development. ()
- 6) Individuals pass only one stage through out the life. ()
- 7) As the child grows ups adjustment to self, others and environment are important tasks which become increasingly complex. ()
- 8) Psychological domain focuses on adjustment of the individual to the environment. ()

1.5 CHARACTERISTICS OF LIFE SPAN DEVELOPMENT

The lifespan perspective argues that significant modifications take place throughout development. It consists of development of humans in multidimensional, multidirectional, plastic, multidisciplinary, and contextual factors. The development involves three factors i.e. growth, maintenance and regulation.

Changes that occur are interpreted in terms of the requirements of the culture and context of the occurrences. According to Paul Baltes, humans have the capacity, plasticity and the ability for positive change to the environmental demands that are being made on the individual constantly. Individual learns ways and means to compensate and overcome difficulties throughout the life. According to Baltes positive characteristics of growing old such as learning ways to compensate and overcome (Boyd and Bee, 2006) are considered important characteristics of old age. These characteristics form a family of beliefs which specify a coherent view of the nature of development. It is the application of these beliefs as a coordinated whole which characterises the life-span approach. The important characteristics beliefs of the life span approach are given below:

- 1) **Lifelong development:** This belief has two separate aspects. First, the potential for development extends across the entire life span, that is, there is no assumption that the life course must reach a plateau or decline during adulthood and old age. Second, development may involve processes which are not present

at birth but emerge throughout the life span. No age period dominates during development. Researchers increasingly study the experiences and psychological orientations of adults at different points in their development. Gains and losses in development occur throughout the life cycle.

- 2) **Development is Multidimensional:** Multidimensionality refers to the fact that development cannot be described by a single criterion such as increases or decreases in a behaviour. It occurs in the biological, cognitive and social emotional domains.
- 3) **Development is Multidirectional:** The principle of multidirectional maintains that there is no single, normal path that development must or should take. In other words, healthy developmental outcomes are achieved in a wide variety of ways. Development is often comprised of multiple abilities which take different directions, showing different types of change or constancy. Some dimensions or aspects of development may be increasing while others are declining or not changing.
- 4) **Development is Plastic:** Plasticity refers to the within-person variability which is possible for a particular behaviour or development. For example, infants who have a hemisphere of the brain removed shortly after birth (as a treatment for epilepsy) can recover the functions associated with that hemisphere as the brain reorganises itself and the remaining hemisphere takes over those functions. A key part of the research agendas in developmental psychology is to understand the nature and the limits of plasticity in various domains of functioning. Development can be modified by life circumstances to some extent. Plasticity involves the degree to which characteristics change or remain stable.
- 5) **Development is Contextual:** Development varies across the different contexts in which we live our lives. For example, social and rural environments are associated with different sets of factors which have the potential to impact on development; understanding how development differs for individuals within these two settings requires an understanding of the differing contexts. It occurs in the context of a person's biological make-up, physical environment and social, historical and cultural contexts.
- 6) **Development is Multidisciplinary:** The study of developmental psychology is multidisciplinary. That is, the sources of age-related changes do not lie within the province of any one discipline. For example, psychological methodologies may not be appropriate for understanding factors that are sociological in nature. Rather, an understanding of human development will be achieved only by research conducted from the perspective of disciplines such as sociology, linguistics, anthropology, computer science, neuroscience and medicine.
- 7) **Development involves Growth, Maintenance, and Regulation:** The mastery of life involves conflict and competition among three goals of human development: growth, maintenance and regulation.
- 8) **Development is embedded in History:** Development is also historically situated and is always influenced by historical conditions. The historical time period in which we grow up affects our development.
- 9) **Normative Age Graded Influences:** Biological and environmental influences that are similar for individuals in a particular age group (example: Childhood, Puberty) also influences development.

- 10) **Normative History Graded Influences:** Biological and environmental influences that are associated with history that are common to people of a particular generation (example: Depression, the AIDS epidemic) also influences.
- 11) **Non-normative Events:** Unusual occurrences that have a major impact on an individual's life; the occurrence, the pattern, and sequence of these events are not applicable to most individuals (e.g. Death of a parent at young age, getting a serious illness, winning a lottery).

1.6 FACTS OF DEVELOPMENT

We all know that development is the critical period for child development. Some significant facts must be taken into consideration to understand the pattern of development. Each of these has important implications and is explained as follows:

- 1) **Early foundations are critical:** Early foundations are critical because attitudes, habits and pattern of behaviour established during early years determine to a large extent how successfully individuals will adjust in their later life.
- 2) **Role of maturation and learning in development:** Maturation and learning play a significant role in the development. Maturation is unfolding individual's inherent traits. Learning is development that occurs from experience and efforts on the individual's part. Maturation provides the raw material for learning. Generally development is influenced by the interaction of both.
- 3) **Development follows a definite and predictable pattern:** It follows a definite and predictable pattern. There are orderly patterns of physical, motor, intellectual and speech development. Development is governed by certain laws: (i) Cephalocaudal Law – It means that development spreads over the body from head to foot and (ii) Proximodistal Law – It means that development spreads outward from the central axis of the body to extremities.
- 4) **All individuals are different:** No two people react in the same way to the same environmental stimuli and, one can never predict with accuracy how people will react to a situation. These individual differences are significant because they are responsible for individuality in personality make up.
- 5) **Each Phase of development has characteristic behaviour:** Each Phase has certain characteristic behaviours. The patterns are marked by periods of equilibrium, when individuals adapt easily to environmental demands and as a result make good personal and social adjustment and by periods of disequilibrium, when they experience difficulty in adaptation, make poor personal and social adjustment.
- 6) **Hazards in each phase:** Each stage is related to certain hazards such as physical, psychological and environment. These hazards inevitably involve adjustment problems. We should be aware of these hazards because awareness of these makes it possible to prevent or to at least alleviate these.
- 7) **Development is aided by stimulation:** While most development occurs as a result of maturation and environmental experiences, much can be done to aid development so that it will reach its full potential. Stimulation is especially effective at the time when ability is normally developing, though it is important at all times.
- 8) **Cultural changes affect the development:** An individual's development is molded to conform to cultural standards and norms, while changes in these standards affect the developmental pattern.

- 9) **Every stage has social expectation:** Every stage has certain societal expectation. The individual will be successful in fulfilling those expectations only if s/he is adhering to the rules and regulations of the family and society.
- 10) **Traditional beliefs:** Traditional beliefs about physical and psychological characteristics affect the judgments of others as well as their self evaluation. So long as these beliefs persist, they have a profound influence on the development pattern.

1.7 RESEARCH METHODS FOR LIFE SPAN DEVELOPMENT

As you know development is a continuous process in a development of a child. It occurs over a life time period, thus we need to special techniques are employed to study the life span development. These techniques are discussed here:

- 1) **Longitudinal method:** For the study of developmental changes in the same group or individual, over a period of time, this method is useful. The same individual is tested at different age group. Example, case study of children behaviour in classroom.
- 2) **Cross-section method:** This method studies the development changes by testing individuals of different ages at the same time only once. This method helps to get the norms or standards of typical pattern of development for different age. This is faster and cheaper method than longitudinal method. It does not loose subjects who dropout of the study since the subjects are tested only once. Example for this method is eating behaviour of 5 years old.
- 3) **Sequential method:** To overcome the drawback of longitudinal and cross-sectional method this method was used. This is best method which combines the longitudinal and cross-sectional method. People in a cross-sectional sample are tested more than once and the results are analysed to determined the differences that show up overtime for the different groups of subjects. This method gives a more realistic assessment.
- 4) **Time lag method:** This method is studying the development of different age groups in different years to determine the effect of historical events on behaviour. This method is rarely used in developmental psychology, because it takes a long time and large numbers of subjects are required and have to be the same age at the time of testing.

Self Assessment Questions

Fill in the blanks.

- 1) The development involves three factors such as _____, _____ and _____.
- 2) Gains and losses in development occur throughout the _____ development.
- 3) Multidimensional development occurs in the biological, _____ and socio-emotional domains.
- 4) Maturation and _____ play a significant role in the development.

- 5) Development is governed by two laws: (i)_____ (ii)_____.
- 6) Each stage has physical, _____and _____hazards.
- 7) _____method is the best method to combine the longitudinal and cross-sectional method.
- 8) _____studying the development of different age groups in different years to determine the effect of historical events on behaviour.

1.8 OBSTACLES IN STUDYING LIFESPAN DEVELOPMENT

There are some obstacles in the study of life span development. The five major obstacles are discussed in the following section:

- 1) **Representative Sample:** The representative sample of a subject is the first obstacle for studying the developmental period. The different age level of the subject is the main concern for the researcher. The data collection from the school children is easy for the researcher but in the case of new born or infant, it is not that much easy. They often face strong parental objection and their mood. Getting older adolescents and young adults who are not attending school to volunteer a subject is also difficult because they may not be available for study at any one particular place. The difficulty arises with the young adult, middle aged adults, or old age person, when many persons shy away from the testing situation. They don't want to disclose their person detail to the researcher, even they are paid off.
- 2) **Establishing rapport with the subject:** The establishing personal rapport to the subject is the second difficult task for the researcher. It is rather difficult to get full personal detail about the subject. They will never share their personal detail. It is also being noted that personal rapport varies from one stage to another stage. Even school children and college students, who often fill tests as a part of their class work, mostly they fill false information. There is no guarantee to the information being accurate. As a result, it is questionable whether data obtained from the subject is the true picture of subject's attitude, feelings, and values. This obstacle may be reduced only by the personal rapport with the subject.
- 3) **Appropriate Methodology:** Adaptation of an appropriate methodology is the main concern of a researcher. We take different age group subjects in a study, some time our target group may be one child, some time the subject may be an adult or some time he may be old person. Because of the wide age range of subject and the variety of different areas of development that must be studied to give a composite picture, assorted methods have to be used. Cross-sectional is the problem for researcher. Cultural changes always play a role in the patterns of physical and mental development of a child. These changes affect values of the subject.
- 4) **Accuracy of data:** Accuracy of data is the fourth obstacle in studying the life span development. The data obtained from the studies will be accurate. Inaccuracy of the data may show the picture of false information of normal development at a particular age given by the subject. The data may vary in many cases such as in regard to intelligence being studied by different methods,

or using observational method for studying the behaviour, well-being, life satisfaction or happiness. The data vary for different age levels. The accuracy of such measures is questionable. Even through the longitudinal approach has a methodology advantage over the cross-sectional approach, the problem of accuracy is still ever present.

- 5) **Ethical aspects:** The ethical aspect is a difficult task for the study of life-span development, as the rights of subject is to be considered by the researcher, even if the subject is being paid by the researcher for the study. Consent of the subject if adult and consent of parents/ guardians if child is an important and necessary step before data collection. These considerations also apply to younger or older subjects.

1.9 LET US SUM UP

In this unit we have studied about the concept of development, growth and development, meaning of life span development and methods of studying development. The key points of our discussion in this unit are:

- 1) Development refers to the biological and psychological changes that occur in human beings between birth and the end of adolescent period as the individual progresses from dependency to increasing autonomy. Because these developmental changes may be strongly influenced by the genetic and environmental factors during prenatal life, these are the part of the study of child development. Growth refers to the development of children from birth to adolescence.
- 2) There are four areas, in which children grow, i.e. (i) physical, (ii) psychological and cognitive, (iii) social and emotional and (iv) sexuality and gender identity. According to Educational Foundation (2001) lifespan development is a process beginning at conception that continues until death. The progression initiates with the emergence of a fetus from a one celled organism. As the unborn child enters the world, the environment in which the child exists begins to influence the child's development.
- 3) There are four interactive forces that combine to shape human development and these are (i) biological forces, (ii) psychological forces, (iii) socio-cultural forces and (iv) life cycle forces.
- 4) Then we discussed about the issues, stages and important domains of development. Characteristics of life span development included many development as being lifelong and following a predictable pattern etc. To understand the pattern of development, certain fundamental facts must be taken into consideration. Each of these has important implications.
- 5) To know the developmental techniques we need to use some research methods, such as longitudinal method, cross-sectional method, sequential and time lag method. In other words, there are some obstacles to apply the research methods as sample not being representative. In some cases there is difficulty in establishing rapport with the subject and yet in certain other cases, the methodology used is not appropriate and thus the accuracy of data becomes questionable. In some cases the ethical aspects of research create difficulty in getting the subject to cooperate and the researcher to collect the data.

1.10 UNIT END QUESTIONS

- 1) What is life span development?
- 2) Explain characteristics of development.
- 3) What are major issues involved in the process of development?
- 4) Describe significant facts about development.
- 5) What are the different periods of development?
- 6) What are the various domains of human development?

1.11 SUGGESTED READINGS AND REFERENCES

Boyd, D. and Bee, H. (2006). *Lifespan Development* (4th ed.). Upper Saddle River, NJ: Pearson.

Hurlock, Elizabeth B. (1980) *Developmental Psychology: A Life-Span Approach*, Mc Graw Hill company.

Hurlock, E. B. (1980). *Developmental Psychology* (5th edition) Tata McGraw- Hill Publishing Company Ltd.

References

Amborn S.R. (1975) *Child Development*, Rinehart Press/Holt, Rinehart and Winson, San Fransico

Baltes, P. B., Reese, H. and Lipsett, L. (1980) 'Lifespan developmental psychology', *Annual Review of Pyschology* 31: 65 - 110.

Mussen, P. H, Conger, J.J & et.al (1984) *Child Development and Personality* (6th edition) Harper & Row, Publishers, New York

Rutter, M. and Rutter, M. (1992) *Developing Minds. Challenge and continuity across the life span*, London: Penguin.

Some portion has taken from Mamta Sharma (B.A. course 2, block 1, unit 1.) and Varsha Godbole (B.A. course 9, group I, block 2, unit 1), IGNOU course materials (2010) New Delhi.

Smith, M. (2009) *Life span development and lifelong learning*

Tennant, M. and Pogson, P. (1995) *Learning and Change in the Adult Years*, San Fransisco: Jossey-Bass. Provides a very helpful overview of life course development for those concerned with lifelong learning.

WGBH Educational Foundation (2001) *Life span development our amazing capacity for change*.

1.12 ANSWERS TO SELF ASSESSMENT QUESTIONS

True or False

- 1) True, 2) True, 3) True, 4) False, 5) False, 6) False. 7) True, 8) True.

Fill in the blanks

- 1) growth, maintains, regulation
- 2) life cycle
- 3) cognitive
- 4) learning
- 5) cephalocaudal, proximodistal
- 6) psychological, environment
- 7) sequential method
- 8) time-lag method.

**Concept of Development,
Growth and Development,
Life Span Perspective,
Methods of Studying
Development and
Characteristics of
Development**



UNIT 2 **PRENATAL DEVELOPMENT (GENETICS, ENVIRONMENT INFLUENCE AND HAZARDS OF DEVELOPMENT)**

Structure

- 2.0 Introduction
- 2.1 Objectives
- 2.2 Beginnings of the Life
- 2.3 Characteristics of Prenatal Period
- 2.4 Period of Prenatal Development
 - 2.4.1 Period of Zygote
 - 2.4.2 Period of Embryo
 - 2.4.3 Period of Fetus
- 2.5 Environmental Influences
- 2.6 Let Us Sum Up
- 2.7 Unit End Questions
- 2.8 Suggested Readings and References
- 2.9 Answers to Self Assessment Questions

2.0 INTRODUCTION

Prenatal development is the process in which an embryo or fetus, gestates during pregnancy, from fertilisation until birth. Often, the terms fetal development, foetal development are used in a similar sense. Most physiologists and members of the medical profession believed that most development takes place before birth. Development before birth takes place in three stages or periods i.e. ovum, embryo and fetus. Many factors are considered to understand the behaviour of a developing child. Mainly five factors are considered:

- 1) Genetically determined biological variables
- 2) Nongenetically determined biological variables (i.e., lack of oxygen during the birth process and malnutrition)
- 3) The child's past learning
- 4) The immediate socio psychological environment (parents, siblings, peers and teachers)
- 5) The social and cultural milieu in which the child develops.

We always considered biological and environment separately for ease of exposition but they always act in unison. This is as true of the individual cell as it is of the whole person. The science of genetics and embryology has shown dramatic progress during the last 25 years. This unit will deal with the current knowledge of human genetics and prenatal factors affecting the course of development. In this unit you will be able

to understand the major happenings during the nine months of prenatal development and what genetics, environmental influence and hazards affect the course of development.

2.1 OBJECTIVES

After going through this unit, you will be able to:

- explain the concept and characteristics of the prenatal period;
- describe the stages of prenatal period;
- point out the genetic factors;
- describe the attitudes of significant people towards the child; and
- analyse the common physical hazards in each subdivision of the prenatal period.

2.2 BEGINNINGS OF THE LIFE

The new life begins with the combination of a male sex cell and female sex cell. The development of each individual begins when a sperm cell from the male penetrates the wall of an ovum, or egg, from the mother. These sex cells are developed in the reproductive organs. For example, the male sex cells are produced in the male gonads, the testes, while the female's sex cells are produced in the female gonads, the ovaries. Development begins at conception. At the moment that the tiny Tadpole-shaped sperm penetrates the wall of the ovum, it releases 23 minute particles called chromosomes. At approximately the same time, the nucleus, the inner core of the ovum, breaks up, releasing 23 chromosomes of its own, so that the new individual begins life with 46 chromosomes.

All the child's biological heritage from the father and mother is contained in these 23 pairs of chromosomes. Of these pairs, 22 are autosomes, possessed equally by males and females. The 23 pair, the sex chromosomes, differs in males and females. It is these chromosomes that determine a child's sex. A female will have two X chromosomes (XX), while a male has an X and Y chromosomes (XY).

Male and female sex cells also differ in two important ways. First, in the mature ovum there are 23 matched chromosomes while in the mature spermatozoa there are 22 matched chromosomes and one unmatched chromosome which may be either an X or a Y chromosomes. The X and Y chromosomes are the sex determinant chromosomes. The mature chromosome ovum always contains an X chromosome. If it is fertilised by a Y-bearing spermatozoa, the offspring will be a boy. If it is fertilised by an X-bearing spermatozoa, the offspring will be a girl.

Once the male and female cells have united, nothing can be done to change the sex of the newly formed individual. Whether this individual is male or female has a lifelong effect on the individual's patterns of behaviour and personality. The question arises why the sex of an individual is important to lifelong development. The answer of this question consists of three points, viz. the following:

- i) Each year children come under increasing cultural pressure from parents, teachers, their peer group and society at large to develop attitudes and behaviour patterns that are considered appropriate for members of their sex. Children who learn to behave in ways that are considered appropriate for their sex are assured of social acceptance.

Prenatal, Infancy and Early Childhood

- ii) Learning experiences are determined by the individual's sex. Children learn what is considered appropriate for members of their sex. A boy who learns to play girls' games is called a sissy and girls who want to play boys games are called tomboy type girl.
- iii) Attitude of parents and other family members are also important to individuals. During the early years, when the foundations of personality pattern are being laid, the children (if twins) must get equal share of the mother's attention. Where the mother gives more attention to one and not to the other, the latter may feel rejected and thus develop a personality which may be negative. Recent studies show that the traditional preference for a boy, especially for the first born, still persists which is so strong that the attitude of parents and family members are affected and in the process the developing infant.

The second way in which male and female sex cells differ is in the number of preparatory stages of development they pass through before they are ready to produce a new human being. All sex cells, male or female, must pass through the preliminary stages of development as for example the male sex cell must go through two preliminary stages (i) maturation and (ii) fertilisation, while female sex cell must go through three preliminary stages (i) maturation (ii) ovulation and (iii) fertilisation.

Maturation is the process of chromosome reduction through cell division: one chromosome from each pair goes to a subdivided cell, which in turn splits lengthwise and forms two new cells. The mature cell, which contains 23 chromosomes, is known as a haploid cell. Maturation of sex cells does not occur until sex maturity has been attained, following the onset of puberty in both boys and girls.

Ovulation is a preliminary stage of development limited to the female sex cells. It is the process of escape of one mature ovum during the menstrual cycle. It is observed that the two ovaries alternate in producing a ripe ovum during each menstrual cycle.

Fertilisation, which occurs at the time of conception, is the third stage of development preliminary to the beginning of a new life. It normally occurs while the ovum is in the Fallopian tube.

2.3 CHARACTERISTICS OF PRENATAL PERIOD

The prenatal period has some important characteristics, each of which has a long lasting effect on development during the life span.

- This is the most important and first period of development in the life span.
- It is the first but shortest period for the new born baby or infancy, which starts from the conception and ends at the birth time of baby. This period is approximately 270 to 280 days or nine months of a calendar.
- Heredity factors are also important for prenatal development; it serves as the foundation for later development. While favourable or unfavourable conditions both before and after birth may and probably will affect to some extent the physical and psychological traits that make up this heredity endowment. The changes will be quantitative and not qualitative.
- Favourable and unfavourable conditions of the mother's body can foster the development of hereditary potentials. Some times the hereditary potentials are so influenced by environmental conditions that they affect the embryo or the fetus as the case may be affecting the development adversely.

- At the time of conception, the sex of the baby is fixed. Except when surgery is used for sex transformation, the sex of the individual, determined at the time of conception, remains the same and does not change.
- During the prenatal period, proportionally greater growth and development take place than any other time throughout the entire life of human.
- Before birth (during nine month) the child grows from microscopically small cell to an infant who measures approximately twenty inches in length and weight, on the average 7 pounds. It is observed that during this time weight increases 11 million times.
- Many believe that this time is more hazardous than other periods of the life span. It certainly is a time when environment or psychological hazards can have marked effect on the pattern of later development..
- During the prenatal period, the attitudes of people towards the newly created individual has significant impact on the development. For example the mother's positive attitude is essential to the normal development of the newly created individual.

2.4 PERIODS OF PRENATAL DEVELOPMENT

The prenatal period is ten lunar months of twenty-eight days each in length or nine calendar months. However, the period can and does vary greatly in length, ranging from 180-334 days. There are approximately three times as many babies born prematurely as post maturely. Meredith has reported that the average length of the prenatal period is 38 weeks or 266 days. However, 70% of babies vary from 36 to 40 weeks or 266 days and 98% range from 34 to 42 weeks (238-294 days). The prenatal period is divided into three stages. These are (i) period of the zygote (ii) period of the embryo and (iii) period of the fetus. Let us take up each of these in detail.

2.4.1 Period of Zygote (*fertilisation to end of second week*)

Half of a person's genetic material comes from his father and half comes from the mother. These two halves come together to form a unique combination of genetic potentialities when the sperm fertilises the egg. In the nucleus of the fertilised egg, or zygote, are the materials that bear the pattern for a new person, one who is different from his parents and yet like them. This first cell in which the male genes are joined with the female is called the *Zygote*. The zygote looks like an unfertilised egg. The egg is so much larger than the sperm that it can absorb the sperm without showing it. However, the unfertilised egg has only twenty-three chromosomes, whereas the zygote has forty six –the twenty three that were in the egg originally and the additional twenty three contributed by the male. Less than two days after the sperm unites with the egg, the zygote divides into two cells. Then these two cells each divide again, and the process of division goes on, forming in nine months a new human being.

2.4.2 Period of Embryo (*end of the second week to end of the second lunar month*)

The embryo develops into a miniature human being. This stage begins on the 15th day after conception and continues until about the 8th week, or until the embryo is 1.2 inches in length. During this period the cells of the embryo are not only multiplying, but they are taking on specific functions. This process is called tissue differentiation. It is during this critical period of differentiation (most of the first trimester or three-

Prenatal, Infancy and Early Childhood

month period) that the growing fetus is most susceptible to damage from external sources (teratogens) including viral infections such as rubella, x-rays and other radiation, and poor nutrition.

A child who has one developmental problem may have other problems that arose at the same time. Kidney problems and hearing problems, for example, are often found together because both kidneys and the inner ears develop at the same time. Formation of the heart begins in 3 weeks, the beginning development of the brain and spinal cord, and the beginning of the gastrointestinal tract.

Teratogens introduced during this period may cause severe problems such as the absence of one or more limbs or a heart that is outside of the chest cavity at birth.

Beginnings of the vertebra, the lower jaw, the larynx (voice box), and the rudiments of the ear and eye develop at weeks 4 and 5 (1/4 inch long). The heart, which is still outside the body, now beats at a regular rhythm. Although arm and leg “buds” are visible with hand and foot “pads”, the embryo still has a tail and cannot be distinguished from pig, rabbit, elephant, or chick embryo by an untrained eye.

Teratogens may cause very serious problems involving the esophagus, vertebrae, and eyes. The baby could be born with severe facial clefts or missing hands or feet.

At week 6 (1/2 inch, 1/1000 of an ounce), formation of the nose, jaw, palate, lung buds takes place. The fingers and toes form, but may still be webbed. The tail is receding, and the heart is almost fully developed. Teratogens at this point may leave the baby with profound heart problems or a cleft lip.

In the 7th week (7/8 inch, 1/30 ounce) eyes move forward on the face, and the eyelids and tongue begin to form. All essential organs have begun to form. Teratogens may cause heart and lung problems, a cleft palate, and ambiguous genitalia (not quite male or female).

At the 8th week (1 inch, 1/15 ounce) embryo now resembles a human being. The facial features continue to develop and the external ear appears. Also, we see the beginnings of external genitalia. By now, the circulation through the umbilical cord is well developed. The long bones begin to form and the muscles are able to contract. Teratogens may still cause heart problems and stunting of the fingers and toes

2.4.3 Period of Fetus (end of the second lunar month to birth)

At this point the embryo is developed enough to call a fetus. All organs and structures found in a full-term newborn are present. The head comprises nearly half of the fetus' size and the face is well formed at weeks 9 to 12 (3 inches, 1 ounce). The eyelids close now and will not reopen until about the 28th week. The tooth buds for the baby teeth appear. The genitalia are now clearly male or female.

Weeks 13 to 16 (6 inches) mark the beginning of the second trimester. Although the skin of the fetus is almost transparent, fine hair develops on the head called lanugo. The fetus makes active movements, including sucking, which leads to some swallowing of the amniotic fluid. A thin dark substance called meconium is made in the intestinal tract. The heart beats 120-150 beats per minute and brain waves are detectable.

Eyebrows and lashes appear and nails appear on fingers and toes at week 17 to 20 (8 inches). This is an exciting time for the parents: The mother can feel the fetus moving (quickening) and also hear the heartbeat with the help of stethoscope.

All the eye components are developed, footprints and fingerprints are formed at week 21 to 24 (11.2 inches, 1 lb. 10 oz) and the entire body is covered in cream-cheese-like vernix caseosa. The fetus now has startle reflex action. Many reflexes, which are automatic and unlearned responses to specific stimuli, appear: swallowing, coughing, and sucking.

During 25 to 28 weeks (15 inches, 2 lbs. 11 oz) we can observe the rapid brain development of the fetus. The nervous system is developed enough to control some body functions, and the eyelids open and close. A baby born at this time may survive, but the chances of complications and death are high at this period.

The 29 to 32 weeks (15 to 17 inches, 4 lbs. 6 oz) development occurs towards independent life. For example, respiration movements are predicted even though oxygen is being provided through the placenta. There is a rapid increase in the amount of body fat and the fetus begins storing its own iron, calcium, and phosphorus. The bones are fully developed, but still soft and pliable. There are rhythmic breathing movements present, the fetal body temperature is partially self-controlled, and there is increased central nervous system control over body functions.

The body hair begins to disappear at the week of 33 to 36 (16 to 19 inches, 5 lbs. 12 oz. to 6 lbs. 12 oz.). A baby born at 36 weeks has a high chance of survival.

At 38 weeks (19 to 21 inches 7 or 8 pounds) the fetus is considered full term. It fills the entire uterus, and its head is the same size around as its shoulders. The mother supplies the fetus with the antibodies it needs to protect it against disease.

Self Assessment Questions

State whether the statement is *True or False*.

- 1) Development before birth takes place in the three stages or period. ()
- 2) Life begins with the only male cells. ()
- 3) A female have X chromosomes and male have an X and Y chromosomes. ()
- 4) X and Y chromosomes are the sex determines chromosomes. ()
- 5) Prenatal period is nine calendar months. ()
- 6) Prenatal period is divided into two stages. ()

2.5 ENVIRONMENTAL INFLUENCES

So far in today's advanced technology, the fetus has been considered to be an active part of research in its own development. Many scientists believe that anything that affects the environment of the fetus can have an effect upon the development beginning at conception and not at birth.

Environment does indeed begin to influence the individual as soon as he or she is conceived. As the zygote undergoes mitosis (cell division), the new cells themselves become part of the mother's environment, and through their particular physical and chemical influence they guide and control the development of further new cells. Different genes are activated or suppressed in each cell, so that while one group of cells is developing into brain tissue, another is giving rise to the heart, another to the lungs, and another to the skeletal system. Meanwhile, the lump of cells is surrounded

by the larger environment of the mother's uterus, and this environment is surrounded by the mother and the world in which she lives.

i) **Mother's diseases:** Mother's diseases is the main cause of fetal death and their possible effects. German measles or rubella and cytomegalovirus diseases are among the most potentially dangerous of the infectious diseases in mothers. These diseases that affect the mother also affects the child and thus affects adversely the development. Studies have shown that there is a high incidence of defective babies if women contracted rubella early in pregnancy. In any case if the rubella virus crosses the placenta; it can result in stillbirth, deafness, prematurity, miscarriage, defects in pancreas, heart and liver. It may also lead to mental retardation. Mumps, polio and influenza are the other viruses which have teratogenic effects. Diabetic mother is as likely to give birth to infants with congenital malformations as non diabetic mother, and their infant often will have respiratory difficulties soon after birth. Women who are suffering from blood poisoning during pregnancy frequently give birth to premature babies or to babies smaller than average babies. In case this blood poisoning is incurable, this may affect the mother and child both.

ii) **Drugs and Chemicals:** For a healthy delivery it is necessary to avoid any kind of drugs and chemicals unless they are professionally recommended by the doctors. Alcohol, antihistamines, aspirin (excess doses), barbiturates, heroin, lead, quinine, thalidomide, insulin (large doses, used in shock therapy) and tobacco are the drugs and chemicals which affect the possible prenatal period development. In many cases, the drugs cause stunting or complete absence of the arms, legs, and fingers. Abnormalities of the internal organs may also occur. Abel, (1980) and Stechler and Halton, (1982) found in their research that greater consumption of alcohol is known to harm the developing embryo and fetus. Having an occasional drink may not be harmful to the mother or fetus. During pregnancy time more than three times consumption of drinks per day would lead to children showing permanent growth retardation, brain cell abnormalities, eye, ear and other facial disfigurations, joint and limb abnormalities, heart defects, mental retardation, and attention deficits. Even smaller daily consumption of alcohol by pregnant women may result in poor attention and reaction time in their children at preschool age.

It has been noted that cigarette smoking had a high risk of delivering prematurely. It is associated with prematurity and low birth weight. These children may suffer from later growth and cognitive deficiencies. A pregnant woman should guard against exposure to all drugs and chemicals during pregnancy, but she must be particularly careful about taking drugs.

iii) **Radiation:** Radiation is responsible for causing damage to the fetus. Larger doses of therapeutic radiation may be injurious to the fetus and sometimes cause spontaneous abortion. There really seems to be no completely safe level of radiation. Even the various levels of natural radiation found in different parts of the world can be correlated with higher or lower chances of babies born in those parts of the world to have congenital abnormalities.

iv) **Abortion:** Termination of pregnancy could be due to natural causes or a pregnancy may be terminated medically due to certain medical reasons. In India if the parents or the family who do not want a baby girl, come to know of the child's sex, they may request the doctor to carry out abortion. Abortion procedure is generally performed by a licensed physician in a hospital or clinic

and it is carried out before the pregnancy advances beyond a specified number of weeks. With modern antiseptic and surgical techniques, abortion in the early months of pregnancy is safer than childbirth. The opposition to abortion now is based on moral and religious, not medical, grounds.

- v) **Age of the mother:** The maternal age have a higher risk for infant defect, prematurity and infant death (Jensen, Benson, and Bobak, 1981; Vital and Health statistics, 1972).

In older woman (woman over 35 years) the ova, which have been present in an immature state from birth, may have been affected by aging or exposure to chemicals, drugs and other harmful agents. In young women (women under 18 years) the reproductive system may not be fully developed. Pregnant teenagers may also have generally poor prenatal care.

- vi) **Nutrition/ Diet of the mother:** The mother is the only sole source of nutrition for the unborn child, a diet providing the proper balance of proteins, fats, carbohydrates, minerals, and vitamins is vital. Many correlational studies of humans indicate a relationship between maternal diet deficiencies and prematurity, low birth weight, stillbirth, growth retardation, and poor mental functioning (Knobloch and Pasamanick, 1974). Diet deficiencies during the first trimester of pregnancy are specially harmful, but deficiencies during the last trimester may also be important because of rapid brain growth during that time (Laster, 1975). Poor nutrition may simply not meet the diet needs of the fetus; it may also act indirectly by increasing the mother's vulnerability to pregnancy complication and disease.
- vii) **Stress in the mother:** The effects of maternal stress are less important than the effects of maternal nutrition but some studies strongly believe that maternal stress may affect the fetus development (Stechler and Halton, 1982). It seems that maternal emotions could influence the growing child. The emotions act through the autonomic nervous system that activates the endocrine glands, which, in turn, regulate the secretion of hormones such as adrenalin. Because hormones can pass through the placenta, they may affect the fetus. In a more recent study, motor depression in newborns was associated with anxiety rated in prospective mothers during the last month of pregnancy, but also with the use of medication during child birth (Standley, ZSoule, and Copans, 1979).
- viii) **The Rh Incompatibility:** The Rh factor, is an inherited protein found in the blood of 85% of the population. The problem arises when the male carries the Rh positive factor, the female does not carry the Rh negative factors and the child develops as Rh positive. If the sibling blood comes into contact with the mother's, the mother system may manufacture antibodies to ward off the foreign Rh protein. The antibodies destroy the child's oxygen-carrying red blood cells, a condition known as *erythroblastosis* and death or mental retardation can occur.

Self Assessment Questions

Fill in the blanks

- 1) A women who are suffering the ————— during her pregnancy frequently give birth to premature.
- 2) Cigarette smoking is associated with the ————— and —————.

- 3) Radiation is responsible of damage the _____.
- 4) _____ is the procedure to know the child gender.
- 5) The mother is the only sole source of _____ for the unborn child.

2.6 LET US SUM UP

In this unit you have studied about the detailed process of prenatal period, which is defined as extending from conception to birth and is approximately nine months long and it has many characteristics. It is the time when the heredity endowment and sex of the individual are determined, when conditions in the mother's body can disturb the pattern of prenatal period. Before they are ready to produce new individuals, male sex go through the two preliminary stages – maturation and fertilisation and female sex cells go through the three stages i.e. maturation, ovulation and fertilisation. The prenatal period is divided into three stages: the period of zygote; the period of embryo and the period of fetus. After a female egg is fertilised, it becomes known as a zygote. Once the egg is fertilised, the zygote begins a two-week period of rapid cell division and will eventually become an embryo. The zygote divides through a process known as mitosis, in which each cell doubles by dividing into two cells. This two-week stage is known as the germinal period of development and covers the time of conception to the implantation of the embryo in the uterus. The period of embryo, this extends from the end of the second week to the end of the lunar month. The period of fetus, this extends from the end of the second lunar month to birth. Attitude of the significant person toward the newly created individual are established during the prenatal period. Environmental influences that adversely affect the child development during the pregnancy. Some teratogens are diseases that infect the mother and infant. Some drugs and chemicals that cross from the mother's bloodstream into the infant. X-rays and abortion, which affect the mother's outside body.

2.7 UNIT END QUESTIONS

- 1) Define the prenatal period.
- 2) Elaborate the stages of prenatal development.
- 3) What are the two stages in which male sex go through?
- 4) What are the three stages in which female sex go through?
- 5) Define the genetic influences on prenatal period.
- 6) How can environmental influences affect the development of infant?

2.8 SUGGESTED READINGS AND REFERENCES

Amborn S.R. (1975) *Child Development*, Rinehart Press/Holt, Rinehart and Winson, San Fransico

Hurlock, E. B. (1980). *Developmental Psychology*, (5th edition) Tata McGraw-Hill Publishing Company Ltd

Libert, R.M; Nelson, R.W; & Kail, R.V (1986) *Developmental Psychology*, Prentice-Hall, Englewood Cliffs, New Jersey 07632

References

Mussen, P. H, Conger, J.J & et.al (1984) Child Development and Personality (6th edition) Harper & Row, Publishers, New York

www.encyclopedia.com

www.psychology.about.com

**Prenatal Development
(Genetics, Environment
Influence and Hazards of
Development)**

2.9 ANSWERS TO SELF ASSESSMENT QUESTIONS

True or False

1) True, 2) False, 3) True, 4) True, 5) True, 6) False

Fill in the blanks

1) blood poisoning, 2) prematurity and low birth rate, 3) fetus, 4) Abortion,
5) nutrition.



ignou
THE PEOPLE'S
UNIVERSITY

UNIT 3 DEVELOPMENT DURING INFANCY (*PHYSICAL, PSYCHOSOCIAL, COGNITIVE AND LINGUISTIC*)

Structure

- 3.0 Introduction
- 3.1 Objectives
- 3.2 Concept of Infancy Period
- 3.3 Characteristics of Infancy Period
- 3.4 Adjustments during Infancy
- 3.5 Hazards during Infancy Period
- 3.6 Physical Development in Infancy
- 3.7 Psychosocial Development in Infancy
- 3.8 Cognitive Development in Infancy
- 3.9 Linguistic Development in Infancy
- 3.10 Let Us Sum UP
- 3.11 Unit End Questions
- 3.12 Suggested Readings and References
- 3.13 Answer to Self Assessment Questions

3.0 INTRODUCTION

In unit one and unit two you have studied about the concept of development, life-span development and prenatal development. Now it is time to understand the infancy period. Infancy period is defined as a state or period of being an infant; the first part of life; early childhood. This is the first period of life and it is very much sensitive period for a child. This period is start from birth -2 years. In this unit we are going to introduce to concept of infancy period and physical, psycho-social, cognitive and linguistic aspects of development. You will also be able to understand the characteristics of infancy period, its adjustment, and some physical and psychological hazards during the infancy period.

Definition of Infancy: The first age of anything; the beginning or early period of existence; as, the infancy of an art.

3.1 OBJECTIVES

After going through this unit, you will be able to:

- define infancy and elucidate the Concept of infancy period;
- explain the Characteristic features of infancy period
- explain how the characteristics differ from characteristics of other periods in the life span;

- explain the adjustment of infancy period and the conditions influencing these adjustment;
- describe about the physical and psychological hazards which faces the child;
- describe physical and psycho-social development during the infancy; and
- explain cognitive and linguistic development during the infancy period.

3.2 CONCEPT OF INFANCY PERIOD

A child goes through the various stages in his full life such as infancy, childhood, adolescence, adulthood and lastly old age. This is the beginning period for a child and fastest period. Infancy period is defined in many areas, some by medical practitioners who define this period as of the period of young child. They do not specify any age limits. Some psychologists use the word infant in much the same way as members of the medical profession do. Infant is minor and is struggling for reaching the age of legal maturity. He is so helpless person and dependent on other persons. The first two years of an individual's life are the time of his most rapid development. Although every child develops at its own rate, each grows up in an orderly and predictable patterns. Cephalocaudally means the development takes place from head to tail and proximodistally means from trunk to extremes.

The behaviour and ability of 2 year old children are different from that of older children. The two year old children can eat, cry, move, babble, play, kick, and smile. Two year old children has the absence of qualities such as the ability to speak, to act with intention, to reason, to be self-conscious, and to experience the emotion of guilty, empathy and pride. Psychologists like Sigmund Freud, Erik Erikson and Jean Piaget highlighted a different aspect of an infant because each was loyal to assumptions that were part of the larger cultural context in which they lived.

3.3 CHARACTERISTICS OF INFANCY PERIOD

The characteristics of infancy period are as follows:

- The infancy period is the shortest period of whole life-span development. It start's from birth to two years. This is the time when fetus comes into the world from the mother's womb where he lives almost nine critical months.
- Adjustment is equally important to the infant as he has to adjust with the outer surroundings. Most of the infants complete their adjustment period in two weeks or less than two weeks. In infants whose birth has been difficult or premature require more time for adjustment.
- Infancy period is a plateau in development. The growth and development which took place during the prenatal period suddenly come to a stop with birth. Infant loses weight after birth, is less healthy compared to what it was at the time of birth. At the end of this period infant again starts gaining weight.
- Bell, R.Q. et. al. (1971) suggested that infancy is a period of future prediction. We can start some future prediction about the infant. Some activities show the prediction of development. It is a preview of later development.
- Infancy is considered a period full of hazards in terms of physical and psychological adjustment. Physical adjustment to the new environment is difficult for the child. The attitudes of the family members create more difficult situation for the infant.

Psychologically, the attitude of significant toward the infant gets crystallized. This attitude changes from one stage to another.

3.4 ADJUSTMENTS DURING INFANCY

As already discussed infants have to make certain important adjustments after birth. They have to make these changes quickly for their better development. If they are not able to effect those changes, they may face some problems regarding their adjustment. Even they may regress to a lower stage of development. There are four major adjustments during infancy period, which are described below:

- i) *Temperature changes:* There is a constant temperature of 100 degree F in the uterine sac, while temperature in the hospital or home may vary from 60 to 70 degree F.
- ii) *Breathing:* When the umbilical cord is cut, infant must begin to breathe on its own.
- iii) *Sucking and Swallowing:* The infant must now get nourishment by sucking and swallowing, instead of receiving it through the umbilical cord. These reflexes are imperfectly developed at birth, and the infant often gets less nourishment than is needed and thus loses weight.
- iv) *Elimination:* The infant's organs of elimination begin to work soon after birth. Earlier, the waste products were eliminated through the umbilical cord.

3.5 HAZARDS DURING INFANCY PERIOD

As mentioned earlier, the period of infancy is the shortest period of development for a child. In this short time there are many hazards. These hazards may be classified as physical and psychological hazards.

- 1) **Physical hazards:** The physical hazards of infancy though of low significance, its effect on infant can affect the entire life span of the child. Some physical hazards are given below:
 - i) *Complication at the time of birth:* If the mother has some complications at the time of birth or delivery, chances of the child getting physically injured are high. A caesarean birth is likely to result in anoxia, a temporary loss of oxygen to the brain. If the anoxia is severe, brain damage will be far greater than if anoxia lasts for only a few seconds. The more complicated the birth and the more damage there is to the brain tissue, greater will be the effect on the infant's postnatal life and adjustment. The use of too much medicine at the time of birth may lead to a serious complication.
 - iii) *Multiple births:* Children of multiple births are usually smaller and weaker than singletons as a result of crowding during the pre natal period, which inhibits fetal movements. These infants tend to be born pre mature, which adds to their adjustment problems.
 - iv) *Post maturity:* If the size of fetus is large then at the time of birth, there may be a need to use instruments or surgery which becomes hazardous to the infant. Critical conditions of birth may create a hazard for the infant.
 - v) *Pre maturity:* The condition of pre maturity may at times be the cause of death of the infant. Prematurely born infants are also especially susceptible

to brain damage. Anoxia is another problem when premature infant's respiratory mechanism is not fully developed. This effect may be such that it can also be long lasting.

Development During Infancy
(Physical, Psychosocial,
Cognitive and Linguistic)

- 2) **Psychological hazards:** Like physical hazards some psychological hazards also affect the infancy period. Some of these are:
- i) *Traditional beliefs about birth:* There are many traditional beliefs associated with birth. These beliefs also affect the development of the child. For e.g. some people believe that those children born with difficult births, have difficult life situation. Some believe that there is some good time or event during the birth. But there is less scientific evidence to support these beliefs.
 - ii) *Helplessness:* Helplessness is another struggle for the infant in outer world. At the time of birth infants are in hospital and under the care of many doctors and nurses. The helplessness of the newborn is more of a psychological hazard in the case of first born children than of later-born children.
 - iii) *Attitude of parents:* The attitude of the parents may be changed at the time of birth. There are many reasons to change this attitude toward the infant such as gender preferences, excessive crying and difficulty in nourishment, complication at the time of birth and unexpected arrival of twins and triplets. The mother's attitude is more important for the infant because infants are in direct touch with their mother.

3.6 PHYSICAL DEVELOPMENT IN INFANCY

Physical Growth

The first year of infant is characterised by rapid physical growth. A normal baby doubles its birth weight in six months and triples it in a year. During that time, there is great expansion of the head and chest, thus permitting development of the brain, heart, and lungs, the organs most vital to survival. The bones, which are relatively soft at birth, begin to harden, and the fontanelles, the soft parts of the newborn skull, begin to calcify, the small one at the back of the head at about 3 months, the larger one in front at varying ages up to 18 months. Brain weight also increases rapidly during infancy: by the end of the second year, the brain has already reached 75% of its adult weight.

Growth and size depend on environmental conditions as well as genetic endowment. For example, severe nutritional deficiency during the mother's pregnancy and in infancy are likely to result in an irreversible impairment of growth and intellectual development, while overfed, fat infants are predisposed to become obese later in life. Human milk provides the basic nutritional elements necessary for growth; however, in Western cultures supplemental foods are generally added to the diet during the first year.

The newborn infant sleeps almost constantly, awakening only for feedings, but the number and length of waking periods gradually increases. By the age of three months, most infants have acquired a fairly regular schedule for sleeping, feeding, and bowel movements. By the end of the first year, sleeping and waking hours are divided about equally.

Prenatal, Infancy and Early Childhood

Maturation: Maturation refers to a universal sequence of biological events in the central nervous system that permits a psychological function to appear, assuming that the child is physically healthy and lives in an environment containing people and objects. Maturation cannot cause a psychological function to occur; it only sets the limits on the earliest time of its appearance. Biological events in youth consider as maturation, when they grow between 12 to 15 years. It is an age of maturation and releases hormones from the pituitary gland located at the brain. But environmental factors, such as the quality of nutrition during childhood, can accelerate the emergence of puberty by several years.

Self Assessment Questions

Fill in the blanks

- 1) The period of infancy is _____.
- 2) _____period called fastest period of life.
- 3) A caesarean birth is likely to result in_____.
- 4) If the fetus is _____at the time of birth, the use of any instruments becomes hazards to the infant.
- 5) Maturation refers to a _____sequence of biological events in the central nervous system.

3.7 PSYCHOSOCIAL DEVELOPMENT IN INFANCY

Psychosocial development is the development of a persons understanding of the environment they are living in, and figuring out how that relates to them, their behaviour, and others. To put it in even simpler terms, it is learning about yourself, through your surroundings and other people.

The theory of psychosocial development is given by the psychoanalyst Erik Erikson. It is perhaps one of the best ways to understand the psychosocial development in infancy period. He describes the impact of social experience across the whole lifespan and it is one of the better theories of personality. Erikson has characterised infancy as the period during which the child develops basic and long-lasting expectations about his world.

The central idea of Erikson's psychosocial stage theory is the development of **ego identity**. Ego identity refers to the conscious sense of self that we develop through social interaction. According to Erikson, our ego identity is constantly changing due to new experience and information we acquire in our daily interactions with others. Erikson also believed that a sense of competence also motivates behaviours and actions. Each stage is concerned with becoming competent in an area of life. If the stage is handled well, the person will feel a sense of mastery, which he sometimes referred to as **ego strength** or **ego quality**. If the stage is managed poorly, the person will emerge with a sense of inadequacy.

Erikson also believed in each stage, people experience a conflict that serves as a turning point in development. These conflicts are centered on either developing a psychological quality or failing to develop that quality. During these times, the potential for personal growth is high, but so is the potential for failure. The psychosocial theory include the Stage 1 - Trust vs. Mistrust (birth to 1 years). The first stage of Erikson's theory of psychosocial development occurs between birth and one year of age and is the most fundamental stage in life. Because an infant is purely dependent on their family members, the development of trust is based on the dependability and quality

of the child's caregivers. If an infant successfully develops trust, he or she will feel safe and secure in the world. Caregivers who are inconsistent, emotionally unavailable, or rejecting contribute to feelings of mistrust in the children they care for. Failure to develop trust will result in fear and a belief that the world is inconsistent and unpredictable. Trust and mistrust is the main feature of infant development. A sense of trust requires a feeling of physical comfort and a minimal amount of fear and apprehension about the future. Trust in infancy sets the stage for a lifelong expectation that the world will be a good and pleasant place to live.

The infancy stage focuses on the infant's basic needs, being met by the parents. If the parents expose the child to warmth, regularly, and dependable affection, the infant's view of the world will be one of trust. If the parents fail to provide a secure environment and fail to meet the child's basic need, a sense of mistrust will result. If proper balance is achieved, the child will develop the virtue hope, the strong beliefs that, even when things are not going well, they will work out well in the end. Failing this, maladaptive tendency or sensory distortion may develop and the malignant tendency of withdrawal will develop.

Others type of social behaviour

There are other types of social behaviour, which are discussed here:

- i) **Attachment:** A new born baby in arms is the greatest feeling of motherhood. An infant always seek love and attention from mother and he cries to be pick up , fed, and otherwise stimulated and often as not he cries when put down. At six weeks, infant will smile at his mother face and grasp his cloth. At this age infant can recognise their caretaker and his faces. He needs mother's and father's attention towards him. This early attachment is called 'indiscriminate'; the infant seeks stimulation rather than any particular person. The concept of attachment is investigated by Ainsworth and her associates (1978), was defined as an emotionally toned relationship or tie to the mother that led the infant to seek mother presence and comfort, particularly when the infant was frightened or uncertain. This indicates that all healthy infants have healthy and strong attachment with their caretakers and this strong bonding provides the basis for healthy emotional and social development during later childhood.
- ii) **Smiling:** Smiling is the means of communication for infants in early years. An early smile of the infant is just a facial exercise of the muscles. A child first pass his smile to his mother and this is at first bestowed indiscriminately between the mother and child. The smile is an important influence on mother - child relationship. The mother's responsive smile is equally important to the child. It transforms the spontaneous smile of the infant into an exchange. This may be called first real social interaction. The *social smile* appears at 7 or 8 weeks of age, and by 3 months infants will smile almost any face. This smile is important to the caretakers and child because it invites adult to interact with the baby and therefore contributes to the attachment bonding.
- iii) **Anxiety:** As we all know that mother and child relation is important in infancy period. The child first recognised his mother face and infant is aware that mother is special person at this time; he is at once in a position to lose her. An infant around 10 months may be seen crawling behind his mother, from one room to another room. If mother is disappearing, he may be cry and scream, and watch every door. Even his crying and searching at different places is an indication of attachment with the mother. The increase in attachment behaviour is considered to be an indication of separation anxiety.

- iv) **Fear of strangers:** A second anxiety that is a direct result of the infant's first attachment is stranger anxiety. The child is specially attach with the mother and he can be easily upset by the approach of an unfamiliar adult, especially if his mother is not present around. The infant fixes his eyes on the stranger and stares, unmoving, for a short time. He is likely to cry and show the signs of distress. Stranger anxiety disappears toward the end of the first year, as the child comes in contact with a growing number of relatives.

3.8 COGNITIVE DEVELOPMENT IN INFANCY

Cognition is a broad and inclusive concept that refers to the mental activities involved in the acquisition, processing, organisation, and use of knowledge. The major processes under the term cognition include detecting, interpreting, classifying and remembering information, evaluating ideas, inferring principles and deducing rules imagining possibilities, generating, and strategies, fantasizing and dreaming.

At the infancy period children develop many elements of abilities to think and to understand the world around them. Infants have remarkably competent organisms, even on the first day of life. The newborn child is ready to the basic sensations of our species. They can see, hear, and smell, and they are sensitive to pain, touch, and changes in bodily position.

Infants are not only growing physically during the first 2 years of life, but also they are growing cognitively (mentally). Every day they interact with different persons and learn about their environment and pathways between nerve cells both within their brains, and between their brains and bodies. Cognitive change and development is a little harder to determine as clearly. Therefore, much about what experts know about mental and cognitive development is based on the careful observation of developmental theories, such as Piaget's theory of cognitive development and Erikson's psychosocial stages. According to Piaget's theory, infants interact with their environment entirely through reflexive behaviours. They do not think about what they are going to do, but rather follow their instincts and involuntary reactions to get what they need, such as food, air, and attention.

Piaget believed that as children begin to grow and learn about their environment through their senses, they begin to engage in intentional, goal-directed behaviours.

Jean Piaget was the most influential developmental psychologist of the twentieth century. The work of cognition has held center stage in child development research since 1960. His theory of cognitive growth and change is original, comprehensive, integrative and elegant. He recorded infant's and children's spontaneous activities, and presented problems of thousands of children and adolescents. His ideas have been the source of many research studies. In Piaget's theory, knowledge is assumed to have a specific goal or purpose to aid the person in adapting to the environment. The child does not receive information passively, and thoughts are not simply the product of teaching by others. Nor is the cognitive progress seen as primarily a product of maturation of a brain. Knowledge is acquired and thought processes become more complex and efficient as a consequence of the maturing child's interactions with the world. The individual is active, curious and inventive throughout the life cycle.

The theory of cognitive development is a comprehensive theory about the nature and development of human intelligence. It deals with the nature of knowledge itself and how humans come gradually to acquire it, construct it, and use it. Moreover, Piaget

claims that cognitive development is at the centre of human organism and language is contingent on cognitive development. Piaget considered cognitive development in terms of stages. He mentioned four stages in cognitive development, that is

Development During Infancy
(Physical, Psychosocial,
Cognitive and Linguistic)

- i) Sensory motor stage (Birth -2years)
- ii) Pre operational stage (2-7 years)
- iii) Concrete operational stage (7-11years)
- iv) Formal operational stage (11-15 years).

Let us take up these stages one by one and discuss.

Sensory Motor Stage (Birth -2 years): The first stage is the sensory motor stage which lasts from birth to about two years old. The infant uses his or her senses and motor abilities to understand the world, beginning with reflexes and ending with complex combinations of sensory motor skills. This stage can be divided into six separate sub-stages as given below:

- i) *Reflexes (birth -1 month):* The child understands the environment purely through inborn reflexes such as sucking and looking.
- ii) *Primary Circular Reactions (1-4 months):* Between one and four months, the child works on an action of his own which serves as a stimulus to which it responds with the same action, and around and around we go.
- iii) *Secondary Circular Reactions (4-8 months):* The child becomes more focused on the world and begins to intentionally repeat an action in order to trigger a response in the environment.
- iv) *Coordination of Secondary Reactions (8-12 months):* Develop certain focuses on the demand object. Responses become more coordinated and complex.
- v) *Tertiary Circular Reactions (12-24 months):* Children begin a period of trial-and-error experimentation during this sub-stage.
- vi) *Early Representational Thought:* Children begin to develop symbols to represent events or objects in the world in the final sensory motor sub-stage.

3.9 LINGUISTIC DEVELOPMENT IN INFANCY

Language development is a process starting early in human life, when a person begins to acquire language by learning it as it is spoken and by mimicry. Children's language development moves from simple to complex. Infants start without language. Yet by four months of age, babies can read lips and discriminate speech sounds. The language that infants speak is called babbling. Speech replaces gestures and babbling as the child starts communicating his desires and ask questions during 6 months period. Speech, symbolism, imitation of family members or others and morality are the most distinctive characteristics of infants. After few months time the infant use their name and personal pronouns I, me, or my. It represents the self awareness and self consciousness.

Usually, language starts off as recall of simple words without associated meaning, but as children grow, words acquire meaning, with connections between words being formed. As a person gets older, new meanings and new associations are created and vocabulary increases as more words are learned.

Prenatal, Infancy and Early Childhood

Infants use their bodies, vocal cries and other preverbal vocalisations to communicate their wants, needs and dispositions. Even though most children begin to vocalise and eventually verbalize at various ages and at different rates, they learn their first language without conscious instruction from parents or caretakers. In fact research has shown that the earliest learning begins in utero when the fetus can recognise the sounds and speech patterns of his mother's voice.

Language is acquired with amazing rapidity, particularly after children speak their first word, usually sometime around the end of the first year. This can be understood during the months of 4-8 months child language characteristics is babbling such as, 'baba', 'dada' and 'gaga'. At the age of 12 months, the infant first utters the understandable words such as mommy, dog, dirty and yes. During 18 months the language transforms into two word combination such as mommy milk, my pencil and drink juice.

There are four main components of language development in children. Each component has its own appropriate developmental periods.

- i) **Phonology** involves the rules about the structure and sequence of speech sounds. From shortly after birth to around one year, the baby starts to make speech sounds. At around two months, the baby will engage in cooing, which mostly consists of vowel sounds. At around four months, cooing turns into babbling which is the repetitive combination of consonant and vowel. Babies understand more than they are able to say.

From 1–2 years, babies can recognise the correct pronunciation of familiar words. Babies will also use phonological strategies to simplify word pronunciation. Some strategies include repeating the first consonant-vowel in a multi syllable word ('TV'—> 'didi') or deleting unstressed syllables in a multi syllable word ('banana'—> 'nana').

- ii) **Semantics** consists of vocabulary and how concepts are expressed through words.

From birth to one year, comprehension (the language we understand) develops before production (the language we use). There is about a 5 month lag in between the two. Babies have an innate preference to listen to their mother's voice. Babies can recognise familiar words and use preverbal gestures.

From 1–2 years, vocabulary grows to several hundred words. There is a vocabulary spurt between 18–24 months, which includes fast mapping. Fast mapping is the babies' ability to learn a lot of new things quickly. The majority of the babies' new vocabulary consists of object words (nouns) and action words (verbs). By 3–5 years, children usually have difficulty using words correctly. Children experience many problems such as under extensions, taking a general word and applying it specifically (for example, 'blankie') and overextensions, taking a specific word and applying it too generally (example, 'car' for 'van'). However, children coin words to fill in for words not yet learned (for example, someone is a cooker rather than a chef because a child will not know what a chef is). Children can also understand metaphors.

- iii) **Grammar** involves two parts. The first part is *syntax*, it refers to the rules in which words are arranged into sentences. The second is *morphology*, it refers to the use of grammatical markers (indicating tense, active or passive voice etc.). From 1–2 years, children start using telegraphic speech, which are two word combinations

- iv) **Pragmatics** involves the rules for appropriate and effective communication. The three skills involved in this include (i) using language for greeting, demanding etc. (ii) changing language for talking differently depending on who it is you are talking to (iii) following rules such as turn taking, staying on topic, etc.

Development During Infancy
(Physical, Psychosocial,
Cognitive and Linguistic)

From birth to one year, babies can engage in joint attention (sharing the attention of something with someone else). Babies also can engage in turn taking activities. By 1–2 years, they can engage in conversational turn taking and topic maintenance.

Self Assessment Questions

State whether the statement is *True or False*.

- 1) Ego identity refers to the conscious sense of self. ()
- 2) The Erikson's theory of psychosocial development occurs between birth to one year of age. ()
- 3) Cognition involved in the acquisition, processing, organisation and use of knowledge. ()
- 4) Sensory motor stage is divided into six sub stages of development. ()
- 5) Six component of language development in children develop at infancy period. ()

3.10 LET US SUM UP

In this unit we have studied about the infancy period with reference to the physical, cognitive, psychosocial and linguistic development. Let us take it one by one:

- 1) The period of infancy covers approximately the first two weeks of life. There are five important characteristics in the infancy period. This is the shortest period of life span; it is the time of adjustment; a plateau in development and consists of hazards filled event in life.
- 2) The hazards are divided into two types first is physical hazards such as unfavourable prenatal environment complication, the time of birth, multiple birth, pre and post maturity and second is the psychological hazards such as traditional beliefs about birth, helplessness, attitude of parents, etc. The infant has to do some adjustment in the outer life.
- 3) Physical development refers by the physical growth and maturation. Psychosocial development is the development of a person's understanding of the environment they are living in, and figuring out how that relates to them, their behaviour, and others. To put it in even simpler terms, it is learning about yourself, through your surroundings and other people. Erikson defines trust vs. mistrust in infancy period. Other types of social behaviour are also mentioned such as attachment, smiling, anxiety, and fear of stranger.
- 4) The theory of cognitive development is a comprehensive theory about the nature and development of human intelligence. It deals with the nature of knowledge itself and how humans come gradually to acquire it, construct it, and use it. Moreover, Piaget claims the idea that cognitive development is at the centre of human organism and language is contingent on cognitive development. Piaget concerned the cognitive development in terms of stages. He mentioned four

Prenatal, Infancy and Early Childhood

stages in cognitive development i.e. (i) Sensory motor stage (Birth -2 years), (ii) Pre operational stage (2-7 years), (iii) Concrete operational stage (7-11years) (iv) Formal operational stage (11-15 years).

- 5) Language development is a process starting early in human life, when a person begins to acquire language by learning it as it is spoken and by mimicry. Children's language development moves from simple to complex. Infants start without language. There are four component of language development i.e. phonology, semantics, grammar and pragmatics. It is discussed in detailed.

3.11 UNIT END QUESTIONS

- 1) Define infancy period.
- 2) What are the characteristics of infancy period?
- 3) Explain physical hazards during infancy period.
- 4) Explain psychological hazards during infancy period.
- 5) Elucidate the role of growth and maturity in physical development.
- 6) Define Erikson theory of psychosocial development during infancy period.
- 7) Explain six sub stages of sensory motor stage.
- 8) Elucidate the four component of language development.

3.12 SUGGESTED READINGS AND REFERENCES

Amborn S.R. (1975) *Child Development*, Rinehart Press/Holt, Rinehart and Winson, San Fransico.

Hurlock, E. B. (1980). *Developmental Psychology* (5th edition) Tata McGraw- Hill Publishing Company Ltd.

References

Ainsworth, M.D.S., Blehar, M.C., Waters, E., & Wall, S. (1978). Patterns of attachment: A psychological study of the strange situation. Hillsdale, N.J.: Erlbaum.

Bell, R.Q., G. M. Weller, and M.F. Waldrop (1971) Newborn and preschooler: organisation of behaviour and relations between periods. Monographs of the Society for Research in Child Development, 36 (1& 2).

Mussen, P. H, Conger, J.J & et.al (1984) *Child Development and Personality* (6th edition) Harper & Row, Publishers, New York

3.13 ANSWER TO SELF ASSESSMENT QUESTIONS

Fill in the blanks

- 1) birth to 2 years, 2) Infancy, 3) anoxia, 4) large, 5) universal.

True or False

- 1) True, 2) True, 3) True, 4) True, 5) False.

UNIT 4 EARLY CHILDHOOD (*PHYSICAL, PSYCHOSOCIAL, COGNITIVE AND LINGUISTIC*)

Structure

- 4.0 Introduction
- 4.1 Objectives
- 4.2 Meaning of Early Childhood
- 4.3 Characteristics of Early Childhood
- 4.4 Hazards during Early Childhood
- 4.5 Growth and Development in Early Childhood
- 4.6 Physical Development in Early Childhood
- 4.7 Psychosocial Development in Early Childhood
- 4.8 Cognitive Development in Early Childhood
- 4.9 Linguistic Development in Early Childhood
- 4.10 Let Us Sum Up
- 4.11 Unit End Questions
- 4.12 Suggested Readings
- 4.13 Answer to Self Assessment Questions

4.0 INTRODUCTION

In the previous unit you have studied about the infancy period its characteristics and common hazards during infancy period. The physical, psychosocial, cognitive and linguistic development of infancy were also discussed in detailed. Now in this unit we will discuss all these aspect in the early childhood period. Firstly, we have to understand the concept of early childhood period and its characteristics. Childhood begins when the infancy period is over approximately two years of the age group. Childhood period is divided into two age group (i) early childhood, 2-6 years (ii) late childhood, 6- to the time the child becomes sexually mature. Early childhood period is called as a conclusion of the infancy period. The child enters in the preschool and forms a personality that no –one adults or other children. His personality is absolutely individual. We generally consider as a ‘little individual’ or ‘small figure’ of the family. It is widely recognised age group and fairly long period in the life span. There are many factors are influence the child personality, that is,

- i) Child social history: The child learning experiences comes form the society and these experiences are supervise by the parents or teachers;
- ii) Culture: The child is encouraged to embody the typical or ideal personality of her culture;
- iii) Place: the element of place and time that bring out some personality traits and leave others to reserve and;

- iv) Biological makeup: facial features, physique, growth rate, genetic and temperament can advance the child personality.

4.1 OBJECTIVES

After going through this unit, you will be able to:

- define and describe early childhood;
- describe the characteristic of early childhood and explain how they differ from other periods in the life span;
- explain the physical and psychological hazards which faces the child;
- describe physical and psycho-social development in early childhood period; and
- explain cognitive and linguistic development in early childhood period.

4.2 MEANING OF EARLY CHILDHOOD

Many psychologists define early childhood term in many ways. In a simple term early childhood age often focuses on children learning through play. It generally includes toddler hood and some time afterwards. Sometimes it is called a play age.

It is also defined as the period from birth to 8 years of age. A time of remarkable brain development, these years lay the foundation for subsequent learning (UNESCO).

The terms preschool or kindergarten age emphasise education around the ages of 3–6 years. The terms “early childhood learning,” “early care,” and “early education” are comparable with *early childhood education*. The terms day care and childcare do not embrace the educational aspects. Many childcare centers are now using more educational approaches. They are creating curricula and incorporating it into their daily routines to foster greater educational learning.

Researchers in the field and early childhood educators both view the parents as an integral part of the early childhood education process. Early childhood education takes many forms depending on the beliefs of the educator or parent.

4.3 CHARACTERISTICS OF EARLY CHILDHOOD

The characteristics of the early childhood are:

- Some parents feel that behavioural problems of childhood period are more troublesome than physical care of infants.
- Some behavioural problems occur in this period such as obstinacy, stubbornness, disobedience, negativistic and antagonistic.
- It is a toy age because most of the time children are engaged with their toys. These toys are also helpful to educate the children. Toys are important element of their play activities.
- This is a period when a child is considered physically and mentally independent. This is also a school going age.
- Children are become more self sufficient, independent, develop self-esteem.
- This is the age of foundations of social behaviour. They are more organised social life they will be required to adjust to when they enter first grade.
- Develop physical, cognitive, emotional and social development.

4.4 HAZARDS DURING EARLY CHILDHOOD

There are some hazards during early childhood, which are divided into two categories, viz., (i) Physical hazards and (ii) Psychological hazards. Let us see what these are:

- 1) **Physical hazards:** Some of physical hazards that affect the children during the early childhood.
 - i) *Illness:* Illness is highly susceptible in early age. Children are more prone to respiratory illness and wide spread infectious diseases. Today many viruses are spread in the air, if children are affected to this virus they will fall sick.. Children who are sick for an extended time fall behind in their learning of skills needed for play and other activities.
 - ii) *Accidents:* The chances of deaths in early years are high because of accidents than at any other age. Some studies suggest that boys are having more accidents than the counterpart of girls. Most young children face the problems of getting knife and blade cuts, burns, infections and broken bones, etc. Some also get into physical accidents which may disable them temporarily or permanently.
 - iii) *Obesity:* Obesity is always a hazard in early childhood years. Children with endomorphic body builds tend, as a group, to have more problems with obesity than do those who have mesomorphic body build. Children who are very fond of food, and having a typical personality are more prone to diabetics and heart attacks, as compared to normal children. This is also a health hazard in early period of development. Having junk food regularly make children more obese.
- 2) **Psychological hazards:** The common psychological hazards are discussed here:
 - i) *Speech hazards:* Communication is an important tool for social belonging. They can communicate through their speech or language. Some time their language is not understandable to others and their communication is not clear and this will lead to the feelings of inadequate and inferiority. The quality of speech is poor in young children.
 - ii) *Social hazards:* There are number of social hazards in early childhood. If a child has some communication problem he may be unpopular with the peer group children. Such children may feel not only the lonely but also feel deprived of opportunities to learn to behave in a peer approved manner. Some times children develop unhealthy social attitudes. Young children who have experiences of discrimination and prejudice because of religion, caste or sex, they manifest biased behaviours. As a result they minimize the contacts with the people at outside the home or inside the home.
 - iii) *Play hazards:* Children who feel isolated in the play ground and lack of playmates, either because of geographical isolation or because they are not forced to engage in solitary forms of play, stand to be rejected by other children and do not develop the needed motor and other related skills and thus may feel handicapped and inferior to other children.

- iv) *Moral hazards*: Inconsistent discipline slows down the process of learning to conform to social expectations. Children are confused when they find that different people have different views about the particular behaviour.

4.5 GROWTH AND DEVELOPMENT IN EARLY CHILDHOOD

Growth and development are complementary processes. Growth indicates the bodily changes in a qualitatively way such as height and weight, and development indicates the changes in both the qualitative and quantitative way (e.g. intelligence, creativity and language acquisition).

Development can be defined as a 'progressive series of orderly coherent changes. The various types of developmental changes follow certain principles. Some of these principles are as follows:

- 1) Growth and development follow an orderly sequence.
- 2) Each child normally passes through a number of stages, each with its own essential characteristics.
- 3) There are individual differences in rate and pattern of development.
- 4) Though the human being develops as a unified whole, yet each part of the body develops at a different rate.
- 5) Development is essentially the result of the interaction between maturation and learning. While maturation is the 'unfolding of characteristics potentially present in the individual's genetic endowment', learning refers to the relatively enduring 'changes that come about as a result of experience and practice.'

Self Assessment Questions

Fill in the blanks

- 1) Childhood period is divided into two age group (i) _____
(ii) _____.
- 2) Early childhood period is called a conclusion of _____ period.
- 3) Physical hazards are _____, _____, _____ and _____.
- 4) Psychological hazards are _____, _____, _____, and _____.
- 5) Growth indicates the bodily changes in _____ way.

4.6 PHYSICAL DEVELOPMENT IN EARLY CHILDHOOD

Early childhood period is more developing period in respect to the cognitive, physical social and language. Erikson, Kohlberg, Piaget, and Bronfenbrenner, explain the more subtle changes that occur inside the body.

Physical changes in early childhood are accompanied by rapid changes in the child's cognitive and language development. From the moment they are born, children use all their senses to attend to their environment, and they begin to develop a sense of cause and effect from their actions and the responses of caregivers

Height: Growth rate slows: the average child in this stage grows 21/2 inches in height and 5-7 pounds per year.

Weight: The average annual increase in weight is 3 to 5 pounds. At age 6, children should gain weight approximately six times as much as they did at birth. The average girl weighs 48.5 pounds, and the average boy weighs 49 pounds. Body fat declines during preschool years.

Body build: Body differences are fairly seen during this period. Some children have an endomorphic or flabby, fat body, some have mesomorphic sturdy look, muscular body build and some have an ectomorphic or thin body. Boys have more muscle while girls have more fat. The boy's muscles become larger, stronger, and heavier.

Motor skills: Gross and fine motor skills progress rapidly. Gross motor skills include running, skipping and jumping. Fine motor skills include turning pages of a book and learning to write and draw.

Brain development: The most important physical development during early childhood is the brain and nervous system growth.

Body proportion and shape: The average preschool child requires 1700 calories per day. Well balanced meals are important in this stage because their diet affects skeletal growth, body shape and susceptibility to disease.

Teeth: During the first four to six months of this stage, the last four baby teeth-the back molars-erupt. During the last half year of early childhood, the baby teeth begin to be replaced by permanent teeth. When early childhood is over, the child generally has one or two permanent teeth in front and some gaps where permanent teeth will eventually erupt.

4.7 PSYCHOSOCIAL DEVELOPMENT IN EARLY CHILDHOOD

Erik Erikson's (1902-1994) theory of psychosocial development describes the impact of social experience across the whole lifespan. The theory of psychosocial development is one of the best-known theories of personality in developmental psychology. The word 'psychosocial' is Erikson's term, effectively from the words psychological (mind) and social (relationships). He believed that his psychosocial principle is genetically inevitable in shaping human development, and it occurs in all people. In early childhood years, children start to develop self-conscious emotions, instead of purely reacting to caregivers' or other adults'. For example younger children feel perfectly happy himself and will not experience negative emotions until caregivers express their displeasure at the messy situation. Children may still enjoy playing with the play mates at early childhood stage and they may feel happy when they get praise or reward from the family members.

According to Erickson's developmental theory, children start to evaluate themselves at the early stage of development of "*Autonomy versus Shame and Doubt.*" At the end of this stage, young children's self-evaluations are either autonomous and positive, or negative and ashamed. Young children who feel autonomous see themselves as good, valuable people who are able to do what is expected of them in a positive way. In contrast, young children who feel ashamed also feel worthless and incapable of doing what is expected of them.

As children become increasingly self-aware, more effective at communicating, and

better at understanding the thoughts and feelings of others, their social skills increase. Children in the early childhood stage become skilled at modifying and expressing their emotions to fit different social situations. For example, Billy may feel angry, but he knows that having a tantrum at school is inappropriate. Similarly, Sally learns that acting pleasant and happy even if she feels shy and scared is a better way to meet people at a birthday party when she doesn't know many of the other children. Changing or controlling one's emotions in social situations is an important skill that allows children to fit in with groups and start to create interpersonal relationships. Children who successfully complete this stage feel secure and confident, while those who do not are left with a sense of inadequacy and self-doubt.

4.8 COGNITIVE DEVELOPMENT IN EARLY CHILDHOOD

Jean Piaget described two processes of behaviour (i) assimilation and (ii) accommodation. *Assimilation* is the process of using or transforming the environment so that it can be placed in preexisting cognitive structures. Let us take an example of an infant who uses a sucking schema that was developed by sucking on a small bottle when attempting to suck on a larger bottle.

Accommodation is the process of changing cognitive structures in order to accept something from the environment.

Both processes are used simultaneously and alternately throughout life. An example of accommodation would be when the child needs to modify a sucking schema developed by sucking on a pacifier to one that would be successful for sucking on a bottle.

As schemas become increasingly more complex (i.e., responsible for more complex behaviours) they are termed structures. As one's structures become more complex, they are organised in a hierarchical manner (i.e., from general to specific).

Stages of Cognitive Development: Piaget identified four stages of cognitive development; sensory motor stage (birth- 2 years), preoperational stage (2-7 years), concrete operational stage (7-11 years) and formal operational stage (11-above).

At the pre-operational stage (Play age and Early Childhood) intelligence is demonstrated through the use of symbols, language use which matures, and memory and imagination are developed, but thinking is done in a non logical, non reversible manner. Egocentric thinking also predominates at this stage. Children form stable concepts and mental reasoning begins to develop.

From 2-4 years children develop symbolic reasoning (the ability to picture an object that is not present.). Egocentrism starts out strong in early childhood, but weakens. Magical beliefs are constructed.

Between 4-7 years of age the child develops intuitive thought (the use of primitive reasoning skills and wondering "why"). Starting school is a major landmark for children at this age. Piaget also noted that children feel great difficulty to accept the views of others and Piaget called this egocentrism. Egocentrism is when children experience difficulty in experiencing others person's perspective.

As we know that this is called a play age and many schools are adopting the Piaget's theory of cognitive development, which provides part of the foundation for constructive learning. Discovery learning and supporting the developing interests of

the child are two primary instructional techniques. It is recommended that parents and teachers challenge the child's abilities. It is also recommended that teachers use a wide variety of concrete experiences to help the child learn (example, use of manipulatives, group work, field trips or work, etc.).

4.9 LINGUISTIC DEVELOPMENT IN EARLY CHILDHOOD

Proper language development is the main concern in the early childhood. Language is the only powerful tool to enhance the ability of cognitive development. As we have already read that unclear communication may create the hazards for the development of a child. A good language always allows the child to communicate or interact with others persons and solve their problems. At the end of age seven, children are able to demonstrate some basic understanding of less concrete concepts, including time and money. However, the eight-year old still reasons in concrete ways and has difficulty understanding abstract ideas.

Beginning the first three years of life, children develop a spoken vocabulary of between 300 and 1,000 words, and they are able to use language to learn about and describe the world around them. By age five, a child's vocabulary will grow to approximately 1,500 words. Five-year-olds are also able to produce five-to seven-word sentences, learn to use the past tense, and tell familiar stories using pictures as cues.

At the age of six years a child can learn consonants that are to be mastered: f, v, sh, zh, th, l .

They should develop the concept of 7 and their speech should be completely intelligible and socially useful. Children at this age should be able to tell others a well connected story about a picture seeing the relationships therein. Between objects and happenings

At the age of seven years a child masters the consonants s-z, r, voiceless th, ch, wh, and the soft g as in George . They should be able to handle opposite analogies easily: girl-boy, man-woman, flies-swims, blunt-sharp short-long, sweet-sour, etc . They must be able to understand such terms as: alike, different, beginning, end, etc. In addition children at this age should be able to tell time to quarter hour and do simple reading and write many words.

Self Assessment Questions

State whether the statement is *True* or *False*.

- | | |
|--|-------|
| 1) Early childhood is more developing period. | () |
| 2) Boys muscles get weak during the early age. | () |
| 3) Children start to evaluate themselves at the early stage. | () |
| 4) Ego centrism is start at pre operational stage. | () |
| 5) Clear communication may hazards for the child. | () |

4.10 LET US SUM UP

In this unit we have studied about the early childhood period with reference to the physical, cognitive, psychosocial and linguistic development. Let us take it one by one:

Prenatal, Infancy and Early Childhood

- 1) Childhood begins when the infancy period is over approximately two years of the age group. Childhood period is divided into two age groups (i) early childhood, 2-6 years (ii) late childhood, 6- to the time the child becomes sexually mature. Early childhood period is called as a conclusion of the infancy period.
- 2) There are many factors which influence the child personality such as, child's social history, culture, place and biological makeup. Early childhood has its own characteristics, which make it strong and influential. Physical and psychological hazards are also affected in the early years.
- 3) Physical changes in early childhood are accompanied by rapid changes in the child's cognitive and language development. From the moment they are born, children use all their senses to attend to their environment, and they begin to develop a sense of cause and effect from their actions and the responses of caregivers
- 4) As children become increasingly self-aware, more effective at communicating, and better at understanding the thoughts and feelings of others, their social skills increase. Children in the early childhood stage become skilled at modifying and expressing their emotions to fit different social situations.
- 5) At the pre-operational stage (called as a play age and early childhood age) intelligence is demonstrated through the use of symbols, language use matures, and memory and imagination are developed, but thinking is done in a non logical, non reversible manner. Egocentric thinking also predominates at this stage.
- 6) Language development is the main concern in the early childhood. Language is the only powerful tool to enhance the ability of cognitive development. A good language always allows the child to communicate or interact with other persons and solve their problems. At the end of age seven, children are able to demonstrate some basic understanding of less concrete concepts, including time and money. However, the eight-year old still reasons in concrete ways and have difficulty understanding abstract ideas.

4.11 UNIT END QUESTIONS

- 1) What do you mean by the early childhood period?
- 2) What are the major characteristics of early childhood period?
- 3) Explain physical hazards during early childhood period.
- 4) Explain psychological hazards in early childhood period.
- 5) Elucidate the role of growth and development.
- 6) Define the concept of Erikson theory of psychosocial development in early childhood.
- 7) Explain the process of assimilation and accommodation in Piaget's theory of cognitive development.
- 8) Elucidate the of language development in early childhood period.

4.12 SUGGESTED READINGS

Amborn S.R. (1975) *Child Development*, Rinehart Press/Holt, Rinehart and Winson, San Fransico.

Hurlock, E. B. (1980). *Developmental Psychology* (5th edition) Tata McGraw- Hill Publishing Company Ltd.

Mussen, P. H, Conger, J.J & et.al (1984) *Child Development and Personality* (6th edition) Harper & Row, Publishers, New York.

4.13 ANSWERS TO SELF ASSESSMENT QUESTIONS

Fill in the blanks

1) early childhood and late childhood, 2) infancy, 3) illness, accidents, and obesity, 4) speech, social, play and moral, 5) qualitative.

True and False

1) True, 2) False, 3) True, 4) True, 5) False

ignou
THE PEOPLE'S
UNIVERSITY

UNIT 1 PHYSICAL DEVELOPMENT

Structure

- 1.0 Introduction
- 1.1 Objectives
- 1.2 Physical Growth in Early School Years
 - 1.2.1 Body Size: Height and Weight
 - 1.2.2 Growth and Development Year Wise 6-11 Years
 - 1.2.3 Motor Skills in Growth and Development (6-11 years)
 - 1.2.4 Development of Teeth, Bones and Muscles
- 1.3 Motor Development
 - 1.3.1 Activities and Skills Between 6-11 Years
 - 1.3.2 Disorders in Physical Development During 6-11 Years of Age
 - 1.3.3 Improvement in Control and Coordination of Fine Motor Skills
- 1.4 Body Proportions
 - 1.4.1 Muscles and Fat
 - 1.4.2 Summary of Physical Development During School Years
- 1.5 Motor Development
 - 1.5.1 Major Motor Developments
- 1.6 Let Us Sum Up
- 1.7 Unit End Questions
- 1.8 Suggested Readings
- 1.9 Answers to Self Assessment Questions

1.0 INTRODUCTION

In this unit we will discuss physical development during early school years which range from 6 to 11 years. Many writers prefer the term 'middle childhood' for this period. "Middle childhood is the period from about the age of 5 or 6 to about the age of 11 and 12. This is a time of leisurely growth between the more rapid growth of the preschool period and the onset of adolescence" (Elkind & Weiner 1978: 374).

The middle years of childhood between the ages of 6 and 12 are often referred to as the school years. This period is characterised by slow but steady physical growth, the perfection of motor abilities and the rapid development of cognitive and social skills.

However, all children do not follow same pattern of growth. Individual differences are high during this period as each child follows her own unique time table of growth. Some characteristics of this stage can be outlined as follows (Rajamal P. Devdas & N Jaya 1984: 125).

This stage extends from the age of 6 years to the time when the child becomes sexually mature. Some writers have even used the term late childhood. This stage begins when the child enters primary school; the child is mostly a first grade student. It has also been designated as the 'elementary school age'. Life in school is responsible for many changes that take place in the child's attitudes and behaviour.

Development During Early School Years (6-11 Years)

Parents regard this stage as the 'smart' age, that is the time when the child thinks he knows everything and does not hesitate to inform others of his/her superior knowledge. To the psychologist, it is the 'gang-age'. The major concern of every normal boy or girl is to be accepted as a member of a 'gang'. This period is also characterised by new social expectations which the child faces. In order to achieve a place in the social group, the older child must master the developmental tasks society expects of him / her.

The mastery of developmental tasks is the responsibility of teachers and, to some extent, members of the peer group. Developing fundamental skills in reading, writing, calculating and attitudes towards social groups and institutes becomes as much the responsibility of the teachers as the parents.

Failure to master the developmental tasks at this stage results in poor personal and social adjustment in subsequent years.

1.1 OBJECTIVES

After reading this unit, you will be able to:

- define Physical growth in middle childhood;
- differentiate between growth and development;
- describe Motor development in this period;
- explain the characteristic features in physical development and growth; and
- elucidate some of the disorders that may obtain at the failure of physical development.

1.2 PHYSICAL GROWTH IN EARLY SCHOOL YEARS

In early school years the growth and development become relatively slower as compared to the earlier periods of development. Yet the growth has its own characteristic features and these are presented below.

1.2.1 Body Size: Height and Weight

This stage is a period of slow and relatively uniform growth until the pubertal changes begin. Increase in height is at the rate of 5 to 6 cms annually. An average girl of eleven years should have the height of 139.2 cm and the average boy of the same age, 138.3 cm.

Increases in weight are also slow and fairly uniform at this age. At the onset of puberty, the average girl of 12 years should weigh 29.8 kg and the average boy of the same age 28.5 kg.

Between the ages of 6 and 12, the average child will grow 2 to 2.5 inches and gain 3 to 6 pounds (Tanner, 1978). The average 6 year old child is almost 3.5 feet tall and weighs about 40 pounds (18.14 kg); the average 12 year old child is almost 5 feet tall and weighs about 80 pounds (Harris, C. 1993). Within this period, it takes children 6 years to double their weight and to increase their height by one-third.

The heights and weights of Indian children reported by ICMR (1968) are given below:

Heights and Weights of Indian Children

Physical Development

SEX	MEASUREMENTS	AGE IN YEARS							
		6	7	8	9	10	11	12	
Girls	Standing height in centimeters	107.4	112.8	118.2	122.9	128.4	133.6	139.1	
	Weight in Kg	16	17.6	19.4	21.3	23.6	26.4	29.8	
Boys	Standing height in centimeters	108.5	113.9	119.3	123.7	128.4	133.4	138.4	
	Weight in kg	16.3	18.0	19.7	21.5	23.5	25.9	28.5	

(Source: Devadas, R.P. & N Jaya (1984) A Textbook on Child Development.
McMillan India Ltd: New Delhi)

Some factors affect the size of body which is as follows:

Weight and height are influenced by many factors. Hurlock (1978: 111) has discussed following conditions which cause variations in body size:

- 1) **Family influences:** This involves both hereditary and environmental aspects. Genetic factors make some children fatter and thus heavier than others. Environment helps to determine whether hereditary potentials will be reached. At every age, environment has a greater influence on weight than on height.
- 2) **Nutrition:** Well nourished children are taller and reach puberty sooner than poorly nourished children. Poor nourishment during puberty can prevent attainment of hereditary growth potentials.
- 3) **Emotional Disturbances:** Persistent emotional disturbances cause an overproduction of adrenal steroids which inhibit production of the pituitary's growth hormone causing delay in the growth spurt. It prevents children from reaching the height they would otherwise attain.
- 4) **Socio-economic Status:** Children from homes of low socioeconomic status are smaller than children from higher and better socio economic status.
- 5) **Health:** Children whose health is good and who suffer from only infrequent and minor illnesses tend to be taller than other children.
- 6) **Endocrine Functioning:** Normal endocrine functioning results in normal size. By contrast, deficiency in growth hormone leads to dwarfism while an excess of growth hormone leads to gigantism.
- 7) **Sex:** Girls at this stage tend to be slightly heavier than boys, and this difference is increased when girls begin their puberty growth spurt sooner than boys in the closing years of childhood.

The size and growth rates of boys and girls are comparable until age 9, and then girls begin to grow more rapidly than boys. For both boys and girls, the initial indication of the growth spurt is a sudden increase in foot length and shoe size (Tanner, 1978).

Thus, whether genetics will be the prominent deciding factor in determining body size of the child or the environment is the deciding factor, depends on the combination of factors. When children get enough to eat and are reasonably healthy, genetics account for individual differences. When children live in poverty and illness, belong to poor socio-economic class, the differences in growth appear (Harris, C 1993).

Development During Early School Years (6-11 Years)

Height more than weight reflects a child's nutritional history. Undernourished children are shorter in stature than well nourished (Pollitt et. al.1982). Under all circumstances, physically abused children grow less well than non-abused children (Karp et al. 1989).

Self Assessment Questions

- 1) Fill in the blanks with appropriate choice given against the statement:
 - a) Middle childhood is a time ofgrowth between thegrowth of the preschool period and the onset of adolescence. (rapid/slow, slow/rapid)
 - b) Middle years of childhood between the ages of 6 and 12 are often referred to as the (Pre school years/ school years).
 - c) Environment has a greater influence on.....than on.....(height/weight, weight/height)
 - d) When children get enough to eat and are reasonably healthy,account for individual differences. (genetics/ environment)

1.2.2 Growth and Development Year Wise 6-11 Years

Growth is physical change and increase in size. It can be measured quantitatively. Indicators of growth include height, weight, and dentition.

Growth rates vary during different stages of development. This growth rate is rapid during prenatal, neonatal, infancy and adolescent stages and slows during childhood.

On the other hand development is an increase in the complexity of function and skill programme. It is the capacity and skill of a person to adapt to the environment. Development is the behavioural aspect of growth.

The new inches or pounds are added in “mini” growth spurts, usually lasting several months and occurring several times a year.

It's normal at this age for adenoids and tonsils to be large – in fact, tonsils may actually meet in the midline.

According to the developed countries data, the average growth and development for males and females 6 years of age through 11 years is given below:

6 years: The average height for females is 45 inches.

The average weight for females is 43 pounds.

The average height for males is 45¾ inches.

The average weight for males is 45.5 pounds.

6 years: The brain is now 90% of its adult weight.

6.5 years: Average age at which the first permanent tooth comes in. However, this age varies based on genetic and environmental factors.

6-puberty: The temporal and parietal lobes in the brain, related to language and spatial relations, develop the fastest during this time.

6-11 years: During this period of time, before the growth spurt of puberty, the growth

rate is very slow and steady, averaging approximately 2 to 3 inches a year.

6-11 years: The average weight gain each year during this period is approximately 5 to 7 pounds.

6-11 years: Strength capabilities double during this time.

6-11 years: A more proportional-looking body forms when the head and waist circumference, as well as leg length, decrease compared to the body height. 6-11 years: Bones continue to harden, but can handle pressure put on them more than mature bones can.

7 years: The average height for females is $47\frac{1}{2}$ inches.

The average weight for females is 48.5 pounds.

The average height for males is 48 inches.

The average weight for males is 50.25 pounds.

8 years: The average height for females is $49\frac{3}{4}$ inches.

The average weight for females is 54.75 pounds.

The average height for males is 50 inches.

The average weight for males 55.75 pounds.

8-10 years: There is a growth spurt in the development of the right hemisphere of the brain. Right Cerebral Hemisphere Functions include improvement in the sensation, perception and appreciation of the stimuli. It also improves the cognitive functions such as spatial orientation, sequencing of objects etc., time perception, music appreciation, recognition of objects and faces and non verbal communication. The development of the right hemisphere function also leads to the development of emotions such as empathy, with and humour etc. Children can now more vigilant and attentive than before. The movements of the left side of the body including vision etc., becomes more refined and improved. Planning, organising etc., become possible due to the right hemisphere development.

9-15 years: "Research has found that female pubertal characteristics develop in this order: breasts enlarge and public hair appears, armpit hair, height increase, hips become wider than shoulders, menarche (which can be very irregular at the beginning), and more fully developed breasts" (Santrock, 2004, p. 375).

10 years: The average height for females is $54\frac{1}{2}$ inches. The average weight for females is 71.75 pounds. The average height for males is $54\frac{1}{4}$ inches. The average weight for males is 69.25 pounds. Development of breasts, pubic hair etc., in girls is seen between 10 – 14 years of age.

11 years: The growth spurt of boys typically begins around this age, averaging about 4 inches per year. The average height for males is $55\frac{3}{4}$ inches. The average weight for males is 77.75 pounds. The growth spurt peaks for girls at this age, on average.

(Source: Age Norms: Child and Adolescent Physical Development Written by Lauren Nudelman 16.12.2008. <http://parentingliteracy.com/norms/56-physical-development/135-age-norms-child-adol-physical-development> Parenting library)

Development During Early School Years (6-11 Years)

1.2.3 Motor Skills in Growth and Development (6-11 Years)

The truly attention-getting change in children will probably be associated with the first signs of puberty. For girls, breast development may start as early as 8 years, although 10 is the average. For boys, enlargement of the testicles and thinning and reddening of the scrotum, (the pouch of skin that holds the testicles) marks the beginning of puberty. Male puberty may begin as early as 9, although 11 is the average.

During these years, children of the same age are frequently at different points in their growth and sexual development. School-age children typically have fairly smooth and strong motor skills. However, their coordination (especially eye-hand), endurance, balance, and physical tolerance vary.

Fine motor skills may also vary widely and influence a child's ability to write neatly, dress appropriately, and perform certain chores, such as making beds or doing dishes.

There will be significant differences in height, weight, and build among children of this age range. It is important to remember that genetic background, as well as nutrition and exercise, may influence a child's growth.

There can also be a big difference in the age at which children begin to develop secondary sexual characteristics. Girls will grow buds of breasts at ten or eleven, her hips will take shape and she may begin to menstruate at eleven or twelve. Eleven is an early start for a first period and even at twelve and thirteen girls are not always emotionally prepared and welcoming of this powerful sign of approaching fertility.

When her periods begin the girl may be proud and excited to be growing up like all her friends or she may, in the back of her mind, be anxious about approaching adolescence and the complications that this introduces into her life. Her biology demands that she be a woman soon - whether she likes it or not. How she feels about it will be strongly affected by her impression of how well adult life has treated her mother and the women close to her. Womanhood may seem rich and pleasurable or scary and hard.

As for boys, the physical changes and emotional challenges are not so dramatic as they tend to mature physically a little later than girls. However around twelve some boys experience masturbation and nocturnal emissions. Boys of this age can be very competitive; and success at sport, or his social position in the playground may be close to his heart and a source of concern for him.

As you already know the head of the newborn is 1/4th the size of the body and that of a 6-8 year old is about 1/6th of the body and by adulthood it will become 1/8th of the body. In other words, the head becomes smaller in proportion to the rest of the body as one grows.

In middle childhood along with gross muscles, fine muscles develop rapidly.

1.2.4 Development of Teeth, Bones and Muscles

- i) **Teeth:** By the time a child is 3 years old, the child has 20 teeth and these are the milk teeth. But by the time the child is in middle childhood, he/she has 28 teeth and these are all permanent teeth. An adult has 32 teeth.
- ii) **Bones:** By middle childhood, all the bones in the body are formed and henceforth, these continue to grow in size and strength. Bones become brittle

when there is too much calcium in them and they break easily. During middle childhood, there is sufficient calcium in the bones to make them strong. This is one reason why the activity level in middle childhood is high. Strong bones provide better anchorage to the muscles.

- iii) **Muscles and Fat:** All bones are covered with fat and muscles. Girls have more fat around their bones than muscles. At seven to eight years, girls start to gain more fat than muscles on their arms, legs and trunk, whereas boys have more of muscles than fat. This is why they have more strength. Boys can generally run longer distances, jump higher, etc.

Self Assessment Questions

1) Tick the most appropriate answer:

- i) By middle childhood, the number of teeth in a child's mouth are
 - a) 20
 - b) 24
 - c) 28
 - d) 32
- ii) Head to body proportion during middle childhood is:
 - a) $1/8$
 - b) $1/6$
 - c) $1/4$
 - d) $1/2$
- iii) All the bones of the body are formed by:
 - a) infancy
 - b) early childhood
 - c) middle childhood
 - d) adolescence
- iv) Boys are stronger because they have more:
 - a) bones
 - b) muscles
 - c) fat
 - d) calcium

1.3 MOTOR DEVELOPMENT

Have you seen 6-11 year old coming out of their classes after school is over? What would they be doing? Yes, you are right ! Some of them would be running, others would be skipping and still others leaping onto narrow edges and balancing themselves. In all these activities, the children are learning to co-ordinate their muscles for different types of movements.

Development During Early School Years (6-11 Years)

The body has two types of muscles, namely, the large muscles such as those of the arms, legs, back, etc., and the small or fine muscles such as those in the fingers, toes, etc. You probably know that muscular activity is possible because of their contraction and flexion (relaxation). Different muscles placed in different parts and some in same parts of the body perform and control different movements. Some part of this control is automatic while some part is learnt. Movement due to muscular control which is learnt is called muscular coordination.

Again, muscular coordination is of two types : fine and gross. The movement of the fine (small) muscles is called fine muscular coordination while the movement of large muscles is called gross muscular coordination. Activities such as running, balancing, skipping, climbing, etc., involve mostly the coordination of large muscles.

Gross muscular coordination

Let us make the following observation. There is a pencil lying on a table. Let us imagine how a one year old child pick it up and how a 3 year old and a 11 year old pick it up?

Generally, the one year old uses her entire palm to pick the pencil while the three year old may use more than one finger and thumb to pick the pencil. At the same time, the eleven year old may use the index finger and thumb and may also be able to manipulate the pencil with very fine movements, i.e., play with it using only the index finger and the thumb or twirl it around or apply just the right pressure for writing.

Fine muscular coordination

As the child grows older greater proficiency over fine movements is gained. This is the period when many activities which involve fine muscular coordination can be taught to the child such as writing, needlework, painting, etc.

It is known from experience that children learn to walk, run, jump, kick, etc., before they learn to feed themselves or write. What does this imply? It means that the gross muscular coordination is learnt before fine muscular coordination. Muscles develop over a period of time and when the muscles are developing, that period is known as the sensitive period.

Think what will happen if we insist on making a child learn an activity before the muscles are ready for it ? Yes, the muscles which are not yet completely formed will get damaged. Which muscles stand greater chance of being damaged? Yes, the fine muscles. This is the reason why children should not be forced to write before they are four and a half to five and a half years old. This is one of the important reasons that the formal schooling for children begin after 5 years of age. From 6-11 years, the handwriting gradually improves i.e., it becomes better and faster. Sensitive period is the time when one can learn a specific activity most effectively.

Around the sensitive period, the body is ready to learn a particular activity or skill most efficiently. If the child is given practice and encouragement at this time to learn that activity or skill, the child will learn it best. Children in the age group of 6-11 years learn maximum number of different activities. They play different types of games. What does this information indicate ? That many of the muscles are maturing at this age.

The following chart shows the motor development or certain activities and skills from 6 years to 10 years.

1.3.1 Activities and Skills Between 6-11 Years

At this time the children will be able to throw a ball at an estimated distance, catch the ball, and they can run with coordinated movements. They can judge and stop a small ball, and can balance on one foot for a very short while. Children at this age can balance and hop on one foot for longer periods.

They can jump at a good height and can skip with two legs. Can hop and jump in small squares and play games with alternate hopping rhythm. Jump as high as one. At this age, children can run and jump hurdles at the same time

1.3.2 Disorders in Physical Development During 6-11 Years of Age

Some of the disorders that may arise in children could be due to physical illnesses, fall and injuries, accidents etc. Some of the disorders are genetic while some are acquired. The disorders that are obtained during this period are given below:

Attention Deficit Disorder (ADD). Hyperactive or Hypoactive.

Hyperactive: Children with this disorder are distractible, impulsive, irritable, moody, slow in learning, and inattentive. Physically such children tend to move from one side to another, cannot inhibit action, and are constantly diverted by sounds and objects. They are chaotic in their behaviour, and tend to forget what they are told to do, cannot do sequentially ordered tasks. The child may be annoying and unpopular amongst peers.

Hypoactive: Children with disorder show less than normal activity levels and excessive daydreaming. They may be quiet and undistracting in their behaviour but may not be able to attend to specific tasks. This may go unnoticed for many years as they tend to be good and compliant in their behaviour.

Execution of motor skills: Children at this age show wide range of individual differences in the execution of motor skills and in their ability to master complex motor tasks. They show improvement in gross motor skills reflected in increased speed, power, coordination, agility, and balance. These children appear to be always in a hurry and their motor development is such that they can now ride scooters, wagons, bicycles or move on skates. They register considerable improvement upon gross motor skills previously acquired and now learns many new skills. They can run faster, with greater accuracy and can cover longer distance. They can now hop and jump in a highly coordinated manner and also can throw, catch and kick accurately as required. Team sports. Basketball, football, baseball, dancing, swimming, roller skating, tennis are some of the sports which can help them refine their motor skills still further. They also show intense interest in acquiring and improving these skills.

As for disorders in regard to these aspects, they may have certain congenital or acquired deficits in motor skills and activities. Many may not be able to show coordination of gross and finer motor skills due to deficiency or abnormality in their physique. Sometimes injuries may lead to certain deformity which may prevent these children involving themselves in different required and essential activities. Sometimes high fever and many physical illnesses may keep the children off from many of these activities and when they do recover, they may not be able to equal their peers and thus feel unhappy. In certain cases children afflicted with polio may have problems in doing any physical activities and similarly children suffering from brain damage due to fall etc. may show poor motor and physical coordination.

1.3.3 Improvement in Control and Coordination of Fine Motor Skills

Children at this age can perform progressively neater and smaller tasks. They can play musical instruments, a feat which requires dexterity and control over the small muscles of the hands and fingers. Tasks such as sewing and knitting, or drawing pictures in minute detail require fine motor control and at this age these aspects develop to a great extent and children are able to accomplish many of these tasks. However children with any kind of physical illness etc. will not be able to accomplish these tasks. .

The extent to which children develop their genetic potential for motor skills.

Motor skills depend upon body size, strength and brain maturation. And, the extent to which children develop their genetic potential for motor skills depends on temperament and personality factors such as energy level, venturesomeness, aggressiveness, and persistence as well as their attitude toward their body build and their eagerness to participate in group functions and competition. Shy children or children with low self-esteem will have difficulty competing with other children, and since motor skills are developed primarily in the context of the peer group, these children will miss out on the opportunity to acquire and develop such skills.

Participation

These children learn to participate in a large number of activities both at school and in the society (neighbourhood). Such participation enables the children to become active members of society. They participate in scouts, little league teams, etc., a context within which they develop friendships and share interests.

Progress in Physical Growth and Motor Development.

There is a steady and sustained growth during this period. There is an increased ability to execute motor skills and master more complex and elaborate motor tasks. Variation in growth among children in this age group is apparent. Not only do children of the same age grow at different rates, children today are taller than they were in previous generations, and they also mature at an earlier age. This phenomenon is known as the secular trend. Attitude about self becomes related to conception about body size and shape. They acquire ability to think about what other people think. Thus, others' reactions to him become important.

1.4 BODY PROPORTIONS

These years are a time of steady overall growth, but the growth rate differs for different body parts, such as legs grow faster than other body parts.

Body proportions change during these years. The disproportion of too large a head decreases; and the lower part of the face increases in size, thus eliminating some of the facial disproportions of the early childhood. The gradual eruption of permanent teeth changes the shape of the mouth. As childhood progresses, the trunk elongates and becomes slimmer. The chest broadens and flattens, the neck becomes longer, permitting the shoulders to drop and the pelvis to increase in size. The arms and legs are thin with no developments in their musculature. The hands and feet grow slowly. The hands and feet are generally longer for boys.

Children lose their 'baby fat'; their faces tend to become slimmer and narrower. School age children usually have a tooth either coming or going. They lose their

baby-teeth, the first one coming out at about the age of 6. Toothless smiles are common among this age group. With the appearance of permanent teeth and several molars, the shape of the child's face is changed. The transition from temporary to permanent teeth is usually completed by about 11 or 12 years of age. Both boys and girls have all their permanent teeth except the second and third molar.

At 6 years of age, the eyes have not yet reached their final shape and size. Many children between 6 and 8 years of age are slightly farsighted, but this condition corrects itself between the ages of 8 and 10 when their eyes reach adult eye size and shape (Jenkins, Shacter & Bower, 1966)¹. One potential implication of this finding is that their early reading material should be printed in large type. Binocular vision (in which both eyes work together) is usually well established by age 6. Reading is best delayed until approximately 6 years of age.

Marked improvements are observed in posture. The rounded shoulders, slight spinal curvature and prominent abdomen of the early years are replaced by more erect bearing. Consequently, school-age children gain efficiency in using their arms and legs.

Brain growth has essentially been finished by age 10 or 12. Bone growth is concentrated in the face, arms and legs. Children are more flexible than adults because their ligaments are less firmly attached and there is more space between the bones at the joints. But since the Ossification² process is still incomplete, children are less resistant to breaks, fractures and muscle pulls than mature adults.

1.4.1 Muscle and Fat

Both in girls and boys, muscles increase in size and strength, although the number of muscle fibers remains the same. The muscles of 6-12 years old are still functionally immature when compared with adolescent. Sports, dance, skating etc. help develop muscle tissues while improving co-ordination.

Heart grows more slowly during school years and is proportionally smaller than at any other period of life (Schwartz et al. 1990)³.

Body fat accounts for 15% of the average school-age child's total body weight. Girls tend to retain more fat than boys at age 6, but unless their eating habits differ, both accumulate body fat at an even rate from age 7 to adolescence. The appetite of the young child increases after six years of age. Thereafter children tend to eat more than they did earlier. Many even over-eat and become obese. The child who is overweight loses out in active play. As a result, he misses out the opportunity to acquire skills extremely necessary for social success.

The gastrointestinal system is quite mature by the time the child is in school. School age children experience fewer stomach upsets, steadier blood sugar levels and a greater stomach capacity than younger ones. Though children at this stage do not need to be fed as carefully or as frequently as preschoolers, caregivers still need to be vigilant in minimizing the child's junk food intake.

The lungs continue to grow until about age 8, though the respiratory airways grow well in adolescence. Lung capacity increases and the respiratory rate or the number of breaths per minute slowly decreases. Bowel and bladder control are usually well established by the school years. The ear and sense of hearing are well developed by school age and auditory sensitivity continues to improve.

1.4.2 Summary of Physical Development During School Years

Sensory systems are mature

Heart and lungs continue to mature.

Brain Growth is complete by age 11 or 12.

Growth during school years is slow and steady until puberty, when girls tend to mature first.

The average child grows 2-2.5 inches taller and weighs 3-6 pounds more each year.

Generally, girls are slightly taller and heavier than boys.

Growth is concentrated in the legs, arms and face.

Baby teeth are replaced by permanent teeth.

1.5 MOTOR SKILLS DEVELOPMENT

“Motor skills are fine coordinations in which the smaller muscles play a major role” (Hurlock 1978: 143). Childhood is often called an ideal age for learning motor skills. There are a number of reasons for this (Hurlock):

First, children’s bodies are more pliable than those of adolescents and adults; hence all learning is easier.

Second, children have fewer previously learned skills that will conflict with the learning of a new skill.

Third, children are, on the whole, more adventurous than grown up people

Fourth, while adolescents and adults find repetition boring, children enjoy it. As a result, they are willing to repeat an act over and over again fewer duties than, until the muscles patterns have been trained to perform effectively.

Fifth, Children have more time to devote to the mastery of because they have fewer duties and responsibilities than they will have as they grow older.

Smooth co-ordination of small and large muscles is refined and used in many activities ranging from reading and writing to playing team games.

Motor skills are refined and expanded. Through play and endless practice, children perfect six basic motor behaviours: running, jumping, sequencing foot movements, balancing, throwing and catching. Improvement in motor skills keeps pace with maturation although practice affects performance of some skills, such as learning to kick a ball (Engelhorn, R. 1988)⁴.

Jumping is a good index of motor co-ordination and strength. At the age of seven boys often exceed girls in the height of vertical jumping. Girls are superior to boys in the task of jumping and hopping into grids (Elkind and Weiner 1978). Rapid improvements in this skill are shown from the age 6 to 9.

Throughout this period, children channel more and more energy into controlled, goal directed activities such as sports and cooperative play. Also children become more competitive and tend to form larger, more complex groups when they play. The benefits of team sports participation include social contact with peers, the exhilaration of self-improvement, learning the value of team work, the fun of the sport and the

importance of physical fitness. Emphasis on competition and winning over learning sports fundamentals devoid all the essence from the sports activities. Sport is a very good medium of boosting motor developments and teaching values. Parents and teachers should encourage striving, improvement and excellence without creating an obsession for perfection.

Handedness is well established by age 6 and small-muscle ability and artistic skill improve steadily from then until 12. Children make great strides in writing and drawing during school years. With practice, school age children can learn to play a musical instrument and to master a variety of handicraft skills such as ceramics, needle work, painting and model building. In this regard, girls continue to have greater hand and finger dexterity than boys.

In addition to dexterity, eye-hand co-ordination improves substantially during the school years. By age 8, the child is better able to plan a movement and by age 10, there is an increase in the child's ability to control the speed and direction of their grasp (Bairstow, P. J. 1989)⁵.

Interestingly, despite the steady progress in fine motor and eye-hand skills, school age children become noticeably more clumsy and less well coordinated during their growth spurt years. Children may be more distractible when they are growing; they are also not used to maneuvering larger feet and a taller frame. Daydreaming and other pre-occupations may also lead to the appearance of clumsiness.

1.5.1 Major Motor Developments

Children improve in running, jumping, sequencing foot movements, balancing, throwing and catching

Children add skilled movements associated with sports, games, music, hobbies etc.

Reaction time improves

Eye-hand coordination improves

Competitive sports participation is common during these years

Left-right discrimination improves

Handedness is well established

Fine motor skills improve. Girls have greater dexterity than boys.

1.6 LET US SUM UP

Physical growth during middle childhood is slow.

Weight range is between 16 to 30 kg and height ranges between 107 cm to 139 cm.

Full set of teeth present except wisdom teeth.

Children during this period are active and busy. Always on the go: jumps, chases, climbs.

Motor task performance is smoother, quicker. Eye-hand coordination improves and manual dexterity is also improved.

Can brush and comb hair without help. Dresses self completely

More caution with new activities. Practice activities to improve skills.

1.7 UNIT END QUESTIONS

- 1) Differentiate between growth and development and indicate the growth of body size in males and females through 6-11 years.
- 2) Write an essay on the physical development of children during elementary school years.
- 3) Describe motor developments that take place during middle childhood.
- 4) Delineate the typical body proportions that take place in school age period.
- 5) What are the major motor skill development that takes place during this period?

1.8 SUGGESTED READINGS

Devadas, Rajamal P. & N Jaya (1984) *A Textbook on Child Development*. Delhi: McMillan India Ltd.

Elkind, D. & Weiner, I. B. (1978) *Development of the Child*. New York: John Wiley & Sons, Inc.

Harris, C. A. (1993) *Child Development*. 2nd Edition. Minneapolis/St.paul: West Publishing Co.

Hurlock, E. B. (1978) *Child Development*. 6th Ed. 7th reprint 1985. McGraw Hill Book Co.

Lefrancois, G. R. (2001) *Of Children: An Introduction to Child and Adolescent Development*. 9th Edition. Wadsworth.

1.9 ANSWERS TO SELF ASSESSMENT QUESTIONS

- 1) a) slow/rapid, b) school years, c) weight/height, d) genetics

Endnotes

¹ Jenkins D D., Shacter, H. S. & Bower W. B. (1966) *These are your Children*. Glenview, Ill: Scott, Foresman, 1966.

² Ossification: the process of replacing cartilage with bony tissue.

³ Schwartz M. W. et al. (1990) *Pediatric Primary Care*. New York: York Book Med.

⁴ Engelhorn R. (1988). EMG and motor performance changes with practice of a forearm movement by children. *Percetual and Motor Skills*, 67(2), 523-529.

⁵ Bairstow, P. J. (1989). Development of planning and Control of hand movement to moving targets. *British Journal of Developmental Psychology*, 7(1), 29-42.

UNIT 2 COGNITIVE, SOCIAL, EMOTIONAL AND MORAL DEVELOPMENT

Structure

- 2.0 Introduction
- 2.1 Objectives
- 2.2 Cognitive Development
 - 2.2.1 Piaget's Theory of Cognitive Development: Concrete Operation
 - 2.2.2 Decentration
 - 2.2.3 Conservation Tasks
 - 2.2.4 A New Ego Centrism
 - 2.2.5 Logical Reasoning
- 2.3 Concept Formation
 - 2.3.1 Information Processing Approach to Cognitive Development
 - 2.3.2 Language Development
- 2.4 Social Development
 - 2.4.1 Relations with Parents and Siblings
 - 2.4.2 Peer Group
 - 2.4.3 Social Cognition
 - 2.4.4 Self-esteem
- 2.5 Moral Development
 - 2.5.1 Piaget's Ideas about Moral Development
 - 2.5.2 Kohlberg's Theory of Moral Development
 - 2.5.3 Moral Judgments and Moral Behaviour
- 2.6 Emotional Development
 - 2.6.1 Common Emotional Patterns
- 2.7 Let Us Sum Up
- 2.8 Unit End Questions
- 2.9 Glossary
- 2.10 Suggested Readings
- 2.11 Answers to Self Assessment Questions

2.0 INTRODUCTION

Keep in mind that the school child's head is not where yours is. It is not just a matter of physical growth-it is perhaps more a matter of intellectual change.....their heads may be closer to the clouds. And perhaps that's why they see magic more clearly than we adults do.(Lefrançois, G. R. 2001: 374).

In this unit we discuss four dimensions of development in middle childhood, that is cognitive development, social development, emotional development and moral development. "The elementary school years are the years 6 through 12 in a child's life, and are sometimes referred to as the latency period. However, in many areas of development, these years are actually action packed, not latent at all. They are filled with both motion and emotion as the child confronts the diverse demands of school; and entry into a rule bound society" (Morgan, King et. al. p. 450).

2.1 OBJECTIVES

After reading this unit, you will be able to:

- Elucidate Piaget's concepts of cognitive development in middle childhood;
- Define Social development in middle childhood;
- Explain Emotional maturity in school going children; and
- Describe Moral development of Kohlberg's theory.

2.2 COGNITIVE DEVELOPMENT

Between the ages of 5 and 7 years, children's thought processes change dramatically. Using Piaget's terms, pre-operational thought is replaced by a rudimentary form of logic. The change is sometimes referred to as 5 to 7 shift. It is "the time during which the child makes a cognitive transition from the preoperational stage to the stage of concrete operations or from induction to logic" (Harris, A. C. 1993: 521).

In the middle ages the child was assigned adult status at age 7 when he was considered to be capable of being without his mother or his nanny (Aries, 1962). Impressive changes in brain development set the stage of 5 to 7 shift (Fishbein, 1984). Cross-model zones (nerve networks that permit information flow from one part of the brain to another) are well developed between the ages 5 and 6. These interconnections tie together different sensory events and modalities. For example, a child might associate an orange with its colour. Later on, associations will also be formed between the orange and its distinctive smell, flavour and its spelling.

Throughout the development, a reciprocal relationship forms between cognition and brain maturation. Brain maturation may support cognitive changes and cognitive activity can also accelerate brain activity.

2.2.1 Piaget's Theory of Cognitive Development: Concrete Operation

Concrete operation is the third stage in Piaget's cognitive theory. The ability to think logically about concrete or real world events and experiences is the hallmark of this stage. Concrete logic becomes possible when the children understand operations. Operations "are flexible mental actions that can be combined with one another to solve problems" (Morgan, King et al. 435).

Operations can be understood as the "set of powerful rules that can transform information from one form to another" (Harris, C.A 1993: 522).

These rules include mathematical operations (identity, addition, division etc.) and relations among categories (class inclusion, seriation etc.).

The operations are concrete in the sense that they are limited to concrete and objects. Abstract concepts are difficult at this stage to be understood.

Self Assessment Questions

- 1) Piaget's theory of development is related to

a) physical development	b) social development
c) moral development	d) cognitive development

2) Arrange the following developmental stages of cognitive development in the ascending order

- i) sensorimotor stage ii) concrete operational stage
iii) preoperational stage iv) Formal Operational stage

Choose the correct option

- a) i ii iii iv
b) i iv ii iii
c) i iii ii iv
d) ii iv i iii

3) Assertion: Concrete operation is the ability to think logically about concrete events.

Reason: The operations are concrete in the sense that they are limited to concrete and objects.

- a) Both A and R are true. R is the reason for A.
b) Both A and R are true. R is not the reason for A.
c) A is true and R is false.
d) R is true and A is false.

2.2.2 Decentration

One of the most significant operations mastered by the school age child is decentration. Children in the concrete operations stage can decenter their thinking, taking into account several aspects or event at the same time.

The concrete operational child organises the world into hierarchies. In these hierarchies, a given thing can fall on more than one dimension at the same time. The following example

(discussed in Morgan and King: 451) will give us a clear picture of difference between the thinking of concrete operational and pre-operational. The latter stage lacks the ability to think about something from various dimensions.

The picture of seven people in a group, two adults and five children, is shown to some 4 year olds and some 9 year olds. "Are there more children or more people?" To this question, most 4-year olds will say, "more children", most 9-year olds will say, "more people". There are two dimensions in this question: people versus non-people, children versus adults. The 4-years old, being preoperational, can focus on only one dimension at a time (child versus adult dimension). The 9-years old recognised that both children and adults fall on the 'people' end of the people versus non-people dimension. These older children answered correctly because their flexible operations allow them to think in terms of hierarchy involving two dimensions, one broader than the other.

2.2.3 Conservation Tasks

In Piaget's terms, tasks that test the child's knowledge of the identity of matter. If the child can solve the conservation tasks (Table 2.1), he/she knows that the physical

Development During Early School Years (6-11 Years)

characteristics of the entity can change but certain other properties stay the same. Concrete operational children are no longer fooled by perceptual appearance of number, volume, mass and other physical properties. They can now solve conservation tasks designed to measure the child's ability to understand apparent transformations. For instance, concrete operational children are no longer fooled into thinking that a flattened ball of clay is larger than the comparison ball, because they understand that the shape of the clay is immaterial to its weight.

The ability to conserve appears to follow a developmental sequence. Children can usually conserve numbers by about 6 or 7, mass and length by 7 or 8, weight around 9 or 10, and volume by 14 or 15 (Gold, R. 1983)¹.

Inhelder and Piaget (1955, 1958) called the developmental lag in conservation abilities 'horizontal décalage'. *Décaler* in French means 'to displace'. Horizontal décalage is the sequential mastery of concepts within a single developmental stage. When children had mastered the concepts of identity, reversibility and reciprocity, they can conserve along any physical dimension.

Identity: The notion that if form changes but nothing has been added or taken away, the amount will remain the same.

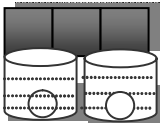
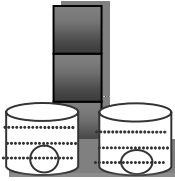
Reversibility: The notion that something which has been changed can be returned to its original state by reversing the process that lead to change.

Reciprocity: If the mass remains constant, a change in one dimension necessitates a change in another. For instance, if an object is flattened, it will become wider as it becomes thinner.

Following table (2.1) summarizes types of conservations and the age at which these concepts are mastered.

Table: Piagetian Conservation Tasks

Type of conservation	Dimension	Change in physical properties	Conservation question	Age at which the task can be solved.
Number	No. of elements in a collection	Rearranging or dislocating elements in a collection	Which line has more marbles? Preconservative child will say longer line has more and conserving child will say both have the same number	6-7 years of age
Substance	Amount of malleable substance	Altering its shape	Do the two pieces have the same amount of clay? Preconserving child will say no. Conserving child will say yes.	7-8 years of age
Length	Two sticks of the same length	Move one stick over	Which stick is longer? Preconsrving child will say one is longer. Conserving child will say both are the same length.	7-8 years of age

Area	Two identical pieces of cardboard with same number of blocks	Rearranging blocks on one cardboard.	Do the two pieces of cardboard have the same amount of open space? preconserving child will say no. conserving child will say yes	8-9 years of age
Weight	Weight of an object 	Altering space 	Which object weighs more? Preconserving child will say vertical shape weighs more. Conserving child will say both weigh the same.	9-10 years of age
Volume	Two identical balls of clay in two identical glasses	Change the shape of one of the balls	Do the pieces of clay displace the same amount of water? Preconserving child will say no. Conserving child will say yes.	14-15 years of age

(Source: Harris, 1993: 523)

The refinement of the ability to conserve may also be accelerated through training and practice. It has been also found that children in societies where concrete operational skills have little relevance develop these skills much later than their more urbanized peers.

The ability to conserve provides the child in concrete operations with a new sense of stability, security; and confidence in their judgments because they can rely on what they know rather than on what they perceive. Piaget tried to dissuade a 7 year old girl from insisting that the amount of water in a tall glass equaled that in a shorter glass. He argued:

“But a girl of your age was here yesterday and she said there was more water (in the glass) because (the water level was) higher.”

“She’s just silly, that’s all,” was the seven year old girl’s reply.

(Quoted in Harris, p.524)

2.2.4 A New Egocentrism

Preschool children are unable to take the viewpoint of others. They have difficulty understanding that other people can reach conclusions different from their own. This preschool egocentrism is replaced in the school years by a different kind of egocentrism: one that permits more flexibility, logic and objectivity. School age children realise that their way of thinking is not the only way. They are now able to appreciate situations from others’ point of view. Children at this stage can successfully solve Piaget and

Development During Early School Years (6-11 Years)

Inhelder's 'Three Mountain Task': when asked what a doll seated to the left, right and front of the subjects might see, young school age children can occasionally select the correct drawing, but the accuracy of perspective taking significantly improves by the time the child is 11 or 12. But once they have formed a hypothesis about how or why things work, they tend to force contradictory facts into their hypothesis rather than changing the hypothesis to fit the facts.

2.2.5 Logical Reasoning

According to Piaget the school age child develops the ability to use inductive reasoning. Induction involves reasoning from a specific observation to a general principal. Children must apply this reasoning when they learn rules and operations. On interpersonal level, this reasoning forms the foundation of empathy.

Between the 3rd and 5th grade, great advances are made in the ability of the child to understand 'if-then' conditions. Additional improvements in reasoning skills occurs between the 8th grade and college I distinguishing 'if ' from 'if and only if' statements.

Deductive logic does not appear until the stage of formal operations (12 to adult).

Self Assessment Questions

- 1) Conservation in Piaget's theory of cognitive development refers to
 - a) the development of inductive logic.
 - b) taking into account several aspects of an event.
 - c) flexible mental actions that can be combined with one another to solve problems
 - d) knowing that an object has not changed in fundamental properties inspite of appearance.
- 2) Match the following and choose the correct option given below:

identity	(i) sequential mastery of concepts within a single developmental stage
reversibility	(ii) if the mass remains constant, a change in one dimension necessitates a change in another
horizontal décalage	(iii) if something has been changed, it can be returned to its original state by reversing the process that leads
reciprocity	(iv) form can change, but if nothing has been added or taken away, the amount is still the same

 - (a) i ii iii iv (b) iv iii i ii
 - (c) iv iii ii i (d) iv ii iii i
- 3) Pick out the incorrect statement about concrete operational thought
 - a) Children at this stage ca understand reversibility and transformations
 - b) Children can take the viewpoint of others
 - c) Children rely more on what they know rather than what they see
 - d) Children's logic is guided by deductive reasoning

- 4) Studies found that conservation for different physical properties develop sequentially. Arrange the following in the order of development
- (i) volume (ii) number (iii) mass and length (iv) weight
- (a) i ii iii iv (b) ii iii iv i (c) ii iv iii i (d) iv ii i iii

2.3 CONCEPT FORMATION

Number: by the age 6 or 7, children's understanding of one-to-one correspondence is complete. For example, school age children realise that six remains six whether it is represented as 5+1, 9-3 or six stars.

Time: until age 8, children have difficulty placing events in their appropriate time sequence. Units of time (minutes, hours, years etc.) have little meaning to them. After age 8, children have a more precise understanding of time passage. They are usually able to classify past and future events according to how recently they occurred.

Spatial Operations: Children have difficulty understanding distance before they reach school age because they don't comprehend the basic units of measurement (miles, feet, km etc.). The ability to navigate within a new environment develops slowly during the school years. Young school children lose their spatial sense easily in unfamiliar and complex spaces. Older children can draw a map of area if they have had the chance to thoroughly explore the space, but even 10 year olds have trouble creating a cognitive map of an environmental space in order to give directions or locate an object (Siegal 1989)².

Classifications: Class inclusion or addition of classes is well developed in school age children. They are able to form class hierarchies and to understand that all things have multiple identities.

By age 6 or 7 most children can understand multiplication of classes. A 7-8 year old child in the stage of concrete operations can sort cutouts in two shapes and two colors into appropriate groups.

Seriation: In addition to classifying and grouping objects, school-age children are capable of sequencing and ordering objects with respect to some measurable dimension, such as weight or size. This process is called seriation.

2.3.1 Information Processing Approach to Cognitive Development

Information processing theorists suggest that concrete logic is a result of improved attention, perception, memory and problem solving skills.

Attention: The ability to focus on relevant information while ignoring distraction or irrelevant cues improves during school years. However, beyond 11 and 12, it shows much more improvement. Interest is high attention getter for children. Children remember interesting sentences, even though allocating less attention to them than to less interesting passages (Shirley & Reynolds, 1988)³.

Perception: Concrete operational logic also influences the way children organise and interpret sensory information. Children can't spontaneously alternate between figure and ground until they are 10 to 11 years old. Children need to master the concept of reversibility to reverse their perceptions. The Embedded Figures test (Witkin et al., 1971)⁴ requires that the child could see a figure in a number of ways.

Development During Early School Years (6-11 Years)

Older children are capable of searching their visual environment thoroughly and systematically. Children below 6 and 7 years of age look quickly and randomly the figures.

Memory Capacity and Memory Storage: School age children are able to hold more information in memory and are better at mentally organising that material than younger children (Brown et al., 1983)⁵. Rehearsal occurs more spontaneously during the school years and is more efficiently applied. Memory is improved by organising and categorising items on a list into related groups. Older children are also more likely to use elaboration. Elaboration is a strategy for improving memory by changing the form of information and associating it with other information and visual images etc. Metamemory – the awareness of memory develops during school years.

2.3.2 Language Development

6 to 12 years old children continue to expand their reading and improve their understanding of words and word meanings. School age children, who are trained to see the relationships between words and who notice the common word structures, develop more extensive vocabularies than those without such training. However, children in this age group often make mistakes. But, like younger children these children also like words and enjoy using them.

School age children continue to refine their understanding of the structure of the language and the way words are organised into sentences. Six and seven year old children tend to be confused by irrelevant information, complex constructions and the implied meaning of certain words.

Children who have language difficulties are more likely to exhibit aggressive behaviour. Apparently, the child has a need to express herself if not verbally then physically (Burke et al., 1989)⁶.

Communication effectiveness also develops together with the cognitive and overall development. Asking others to clear their confusion and persuading others to do something for them and showing more sensitiveness of the listener's needs make their communication different from the preschoolers. Enhanced vocabulary also adds to their effective communication.

2.4 SOCIAL DEVELOPMENT

School children's world expands gradually from families to schools, from sibling to peers and friends, from parents and teachers. All these worlds play a crucial role in forming child's personality.

2.4.1 Relations with Parents and Siblings

As children grow through the school years, they want to spend more time with their friends and less time with their family. Adults other than family (teachers) are more important. Children want to make more and more of their decisions. Parents are challenged to provide guidance without being overly restrictive or protective. Children experience fewer failures and recover more quickly when they do fail if they know that their parents are proud of them and have faith in their competence and resilience. Children whose parents belittle them and communicate doubt on their abilities usually experience more failures and less achievement in school and a greater loss of self-esteem than those with more supportive parents (Grolnick & Ryan 1989)⁷.

School age children are ready for more responsibility both at home and outside. Parents can help children take responsibility for some household chores and personal items. These involvements play an important role in their development of useful skills, self-confidence, and appreciation of tasks related to daily living. Research shows that children with household responsibilities behave in more nurturing, helpful and mature ways than those who have no such demands upon them (Baumrind 1971)⁸.

Value development is affected by parents' behaviour throughout child rearing years. During middle years children have the opportunity to apply these values in making independent decisions. They also test them against other alternatives. When parents and peer values conflict in matters like truth telling, school age children often side with their peers. The values are more resistant to change when children know the reasons for the beliefs.

High self-esteem is the most important predictor of personal happiness and effective functioning. Self esteem refers to an individual's positive feelings about herself and competencies in specific areas. Self-esteem is influenced by the child's self-perception and her home and school experiences. Adults can help children gain /maintain self-esteem by helping them feel powerful, competent, virtuous and significant.

Although school-age children become increasingly independent as they mature, they still need reasonable, consistent guidelines to direct their behaviour. They might complain about restrictions, but in the end, controls make children feel secure and are seen as expressions of their parents' love and concern (Whaley and Wrong, 1988)⁹. Parents' role changes to consultants as well as caregivers. Children often negotiate for what they want, rather than having emotional outbursts.

Mothers are preferred companions. Fathers tend to encourage independence and assertiveness; mothers tend to train interpersonal skills.

Siblings' relationships tend to be particularly significant during middle childhood. Siblings teach and help each other. They practice social skills (expressing gratitude, annoyance, surprise and fear) by interacting with each other. Younger siblings emulate older ones.

2.4.2 Peer Group

Peer group is a group of equals. Same-age, same sex children assemble into informal peer groups during the school groups. Between ages 6 and 9, these groups are rather small, loosely organised groups whose membership changes frequently. Peer groups have a status hierarchy among the members. By the time children are in fifth or sixth grade, their groups have become more structured, more formalised, more exclusive and more cohesive. School age children expect each other to follow social norms that promote courtesy, fair play and respect for others (Hartup, 1983)¹⁰. Cooperation is a frequently chosen conflict resolution strategy among girls, while boys favour competition (Crick & Ladd, 1990).

Peers are agents of socialisation. Peers transmit information about attitudes and values and influence each other's behaviour through modeling and reinforcement.

Conformity is the mainstay of the peer group structure. If the child's moral reasoning leads him to be conscious of rules and to be viewed as 'good', schoolchildren conform to the group because they value their peers' opinions even more than those of adults.

Studies across cultures have shown that the tendencies for children to follow peers

Development During Early School Years (6-11 Years)

are not inevitable. These tendencies depend upon socialising experiences of children. Peer groups in Soviet Union, unlike those in the United States, support and enforce the values of the adult culture (Bronfenbrenner, 1970)¹¹.

For peer acceptance social competence is important. “Social competence is reflected in children’s ability to sense what is happening in social groups, in a high degree of responsiveness to others and in an understanding that relationships develop slowly over time” (Lefrançois, G. R. 2001: 461). Peer acceptance or rejection (socio metric status) is assessed by using two methods: Peer Ratings or Peer Nominations.

In an attempt to investigate definition of social status and the nature of social isolation, Gottman (1977)¹² studied 113 children in depth. His observations suggest five distinct categories of children:

Socio metric stars: those who are equally liked by all.

Mixers: those who interact often with peers; some well liked, others not.

Teachers negatives: Typically in conflict with teachers, some liked, others not.

Tuned out: usually not involved in what is going on; ignored rather than rejected.

Socio metric rejections: not only disliked but also actively rejected by everyone. They might be rejected because they are withdrawn or socially incompetent (withdrawn-rejected) or overly aggressive (aggressive rejected).

Friendship during these years is not reciprocal. Friends are seen as people who “do things for each other” (Selman, 1980)¹³. Friends are often the same sex: boy-boy, girl-girl. Selman (1980) suggests developmental progression in children’s friendship:

- Playmates (3-7): friends are those who play together with
- Assistants (4-9): Friends are those who help each other
- Cooperators (6-12): Friends have to cooperate, share goals and procedures and make compromises
- Intimates and mutual supporters (9-15): Friends share goals and values, and provide intimacy and support; strong friendships can survive occasional disagreements
- Dependent but autonomous (12 and beyond): Adult like understanding of the mutual dependence of friends on each other, paired with the need to maintain individuality and independence and to cultivate other relationships.

2.4.3 Social Cognition

Social cognition refers to the knowledge of emotion of others. The realisation that others have feelings, motives, intentions and so on (Lefrançois, G. R. 2001: 585). With the expansion of social world, children’s way of thinking about people also changes. Selman (1980) describes the development of children’s ability to understand and verbalise another person’s point of view in five stages, labeled 0 to 4.

Egocentric (3-7 years): there is no other perspective but mine. People feel the way I would in a situation

Social informational (4-9): Others have a point of view, but they would feel the way I do; aware but don’t understand.

Self-reflective (6-12): begin to infer other views; we can have different point of views, I can see mine, they can see theirs

Mutual (10-12): can switch perspectives; maybe I can see theirs and they can see mine.

Social and conventional (12-adulthood): can analyse perspectives in abstract terms.

2.4.4 Self-esteem

Self esteem refers to self appraisal. According to William James, self worth is a direct function of the difference between what I would like to be and what I think I am (James 1892)¹⁴, i.e. it reflects the discrepancy between the individual's actual performance and ideal competence.

School age children can assess their worth in general terms as well as in five areas: scholastic, athletic, physical appearance, social acceptance and morality. High self worth is associated with happiness; low self-worth with sadness and depression.

2.5 MORAL DEVELOPMENT

Together with the development of cognition and social skills, children develop along the dimension of the moral values and reasoning. They learn the rules for right and wrong and understand other laws and rules.

In this section, we will examine Jean Piaget and Lawrence Kohlberg's theories of moral development during school years.

2.5.1 Piaget's Ideas about Moral Development

In Piaget's (1935/1965) views the child enters a new stage of moral development when he enters the stage of concrete operations at age 6 or 7. He called it *heteronomous morality* or *moral realism* (heteronomous means under an outside authority). In this stage rules are regarded as unchangeable, absolute and imposed by an external authority. Egocentrism of young children encourages them to adhere to three beliefs:

Imminent justice: wrongdoing invariably leads to punishment.

Objective Consequences: morality of an act is judged by its objective consequences, not the objective intentions of the persons.

Absolutism: Young school children believe in the absolutism of moral perspective. They believe that there is only one correct moral conclusion per circumstance.

Stage of autonomous morality or *morality of cooperation* A new stage, is achieved around the age of 10. As children become less egocentric by age 9 or 10, they are also able to realise that rules are not fixed but arbitrary. They come to know that rules can change and it is possible to make personal decisions about obeying rules.

Moral authority of adults is replaced in part by a morality based on cooperation and mutual understanding. At this stage, it is not wrong to break the rules; rather, the motives, the rules, the specific situations are all considered in making a judgment. They feel praise and punishment should be distributed in a non-arbitrary, even-handed way. It is hard for children at this stage to understand that the same behaviour might evoke different responses from different people.

2.5.2 Kohlberg's Theory of Moral Development

Lawrence Kohlberg sought to refine and extend the ideas of Piaget and the pioneering work of James M. Baldwin (1894) by creating a comprehensive three-stage theory. Kohlberg studied moral development by posing moral dilemmas to groups of children as well as adolescents and adults. These dilemmas take the form of stories, one of

Kohlberg's best known dilemmas involves a man named Heinz, who must choose between stealing medicine and letting his wife die.

In Europe, a woman was near death from a special kind of cancer. There was one drug that the doctors thought might save her. It was a form of radium that a druggist in the same town had recently discovered. The drug was expensive to make, but the druggist was charging ten times what the drug cost him to make. He paid \$200 for the radium and charged \$2000 for a small dose of the drug. The sick woman's husband, Heinz, went to everyone he knew to borrow the money, but he could only get together about \$1000, which was half of what it cost. He told the druggist that his wife was dying and asked him to sell it cheaper or let him pay later. But the druggist said, "No, I discovered the drug and I'm going to make money from it." So Heinz got desperate and considered breaking into the man's store to steal the drug for his wife. Should Heinz steal the radium? (Kohlberg & Gilligan, 1971: 1072-1073)¹⁵.

Instead of the answer, Kohlberg analysed the reasons children gave for their answers. He identified three general levels of moral reasoning: preconventional, conventional and postconventional and described two stages at each level.

(i) Preconventional Level	Stage-1 Punishment-obedience orientation
	Stage-2 Instrumental-exchange orientation
(ii) Conventional level	Stage-3 Good-boy-nice-girl orientation
	Stage-4 System-maintaining orientation
(iii) Postconventional Level	Stage-5 Social-contract situation
	Stage-6 Universal-ethical-principles orientation

Moral reasoning of preschool children was influenced by a concern for obedience and punishment and for satisfying personal needs. When children enter the stage of concrete operations, they are able to turn away from their egocentric thinking, growing more concerned about appearing 'good'.

According to Kohlberg (1969, 1976) this shift in focus is characteristic of *conventional level of moral reasoning*.

Concern with law and order is an important aspect of conventional reasoning. Rule breaking is considered to be inherently immoral because it creates chaos in a stable social system. Reasoning at this level fits what many societies consider to be acceptable moral rules.

2.5.3 Moral Judgments and Moral Behaviour

In a classic study of 10,000 children, Hugh Hartshorn and Mark May (1928-1930)¹⁶ found that students who support rigid moral standards don't necessarily behave in ethical and desirable ways. Nine to eleven year old children are quick to

find excuses to justify their own rule infractions. Solving moral dilemmas involves trying to coordinate several sets of conflicting needs and motives, including the laws of the culture, the morality of peers, parents' and teachers' guidelines and self-interest. The third and fourth grader may be able to identify moral of a story but may not be able to apply it. Moral decision making benefits from practice and maturity and from specific instruction on how to generalise moral principles to life.

2.6 EMOTIONAL DEVELOPMENT

Emotions play an important role in life. Emotional expressions change with the development with the dimensions of emotions when children grow towards maturity. Patterns of emotional development vary for children and are affected by various factors. Health, intellectual level, environment and social reactions have been shown to affect emotional development. Authoritarian child rearing encourages the development of anxiety and fear while permissive and democratic training encourages the development of curiosity and affection. Children of low socio-economic status tend to have more fears and anxiety than those of higher socio-economic status (Croake, 1969)¹⁷. Differences of emotional expressions are also found between girls and boys. Girls often dissolve into tears or temper outbursts. Boys express their annoyance and anxiety by being sullen and moody.

The common emotions of the late childhood differ from those of early childhood in two respects: in the type of situation that gives rise to emotional reactions and in the form of expression.

After the child becomes adjusted to school, the emotionality tends to subside because (Devadas & Jaya 1984):

- i) The roles of the older child are well defined.
- ii) He has a ready outlet for any pent-up emotional energy through games and sports.
- iii) The feeling of frustration is less with the improvement in skills.

2.6.1 Common Emotional Patterns

Fear: A gradual shift from typical fears to general fears has been observed. In Hurlock's (1978: 198) words, "among older children, fears are concentrated on fanciful, supernatural or remote dangers; on the dark and on imaginary creatures associated with dark; on death and injury; on the elements, especially thunder and lightning; and on characters recalled from stories, movies, comics, and television. ...afraid of failing, of being ridiculed and of being different".

All fear stimuli tend to be sudden and unexpected. But with growth children can adjust more quickly to sudden and unexpected circumstances and many fear producing conditions do not cause fear when they grow. Overt fear responses are curbed by social pressure. The facial expressions express fear; children may also express fear indirectly in a general motor discharge, retreat and withdrawal, imaginary ills and quaking (Hurlock, 1978: 199). Shyness, embarrassment, worry and anxiety are some fear related emotions. Shyness in older children may be expressed by blushing, stuttering, nervous mannerisms e.g. pulling at ears and clothing, shifting from one foot to the other.

Anxiety: Anxiety develops later than fear as it depends upon the ability to imagine something not present. It is often found during early school years and tend to increase

Development During Early School Years (6-11 Years)

during fourth to sixth grade. Anxiety may be expressed as depression, nervousness, irritability, mood swings, restless sleep, quick anger and increased sensitivity to what others say. Anxious children are unhappy children because they feel insecure.

Anger: Anger is more frequently expressed emotion in childhood than fear (Hurlock 1978: 202). Thwarting of desires, interruption of activities in progress, constant faultfinding, teasing, unfavourable comparisons with other children are some of the factors that arouse anger in older children. Hurlock divided responses to anger into two major categories: impulsive and inhibited. Impulsive responses include aggressive behaviour. Temper tantrums normally decrease with age. Inhibited responses are kept under control. Children may withdraw into themselves. They express their anger by acting hurt, being sullen, feeling sorry for themselves, or threatening to run away.

Curiosity: Curiosity is the instinctive foundation of intellectual life. Asking questions is normal for children. Every adult faces what, why, how about things that adults have never noticed. Children feel curious about everything from their own bodies, dresses people wear, light switches, television sets, change in mother's hair style, to permanent tooth. The 'questioning age' is replaced by reading when they grow, if they feel that reading can answers to their questions.

Joy, pleasure and delight: Joy is a pleasant emotion. In its milder forms, it is known as pleasure, delight or happiness. Joyful expressions range from a quiet, calm, self-satisfied contentment to a bubbling exuberance (Hurlock, 1978: 206). As children grow older, they learn to express their joy in the socially approved pattern for the group with which they are identified. They learn that gloating over a person they have defeated is poor sportsmanship. Success is the most pleasant situation for school children. This achievement can be academic, sports or other competitions. Company of friends and play are delightful to children of all ages. There may be individual differences from child to child. Some children may find joy when they see trees, birds and in contemplation. Some parents deliberately arrange some time for children for the activities that may be delightful and could save them from mechanical routine of school, tuitions, homework and competitions. A predominance of the pleasant emotions, such as love, joy and happiness is essential for normal development. These emotions lead to feelings of security which help children approach their problems with self-confidence.

All children should learn emotional tolerance as the control over the environment becomes increasingly difficult. Emotional tolerance, the ability to accept and adjust to unpleasant emotional experiences, is an essential condition to emotional balance.

2.7 LET US SUM UP

In this unit we have discussed four major dimensions of development of school going children: Cognitive, Social, Moral and Emotional development. Cognitive developmental views of Piaget characterise the developmental stage of the child at 6 to 11 or 12 years as concrete operational. As the child grows physically and mentally, his behaviour shows marked differences from the earlier stages. Socially, children of this age group like the company of their friends and peers more than their parents. They are busy in learning various skills which bring change in emotional expressions. Learning what is socially right and wrong goes along with the above dimensions of development. At this stage development is more affected by learning and training. This is where schooling becomes important.

2.8 UNIT END QUESTIONS

- 1) Discuss the cognitive development during school years in the light of Piaget's theory of cognitive development.
- 2) What are the social changes that are the characteristic of school going children?
- 3) Write an essay on the Kohlberg's moral development theory.
- 4) Observational application: How many friends does a typical child have? How important are they?

2.9 GLOSSARY

Operations	: Flexible mental actions that can be combined with one another to solve problems.
Concrete operations	: The ability to think logically about concrete or real world events and experiences.
Decenter	: Children in the concrete operations stage can decenter their thinking, taking into account several aspects or event at the same time.
Conservation	: Knowing that the physical characteristics of the entity can change but certain other properties stay the same.
Identity	: The notion that if form changes but nothing has been added or taken away, the amount will remain the same.
Reversibility	: The notion that something which has been changed can be returned to its original state by reversing the process that lead to change.
Reciprocity	: If the mass remains constant, a change in one dimension necessitates a change in another. For instance, if an object is flattened, it will become wider as it becomes thinner.
Horizontal décalage	: The developmental lag in conservation abilities. Horizontal décalage is the sequential mastery of concepts within a single developmental stage.
Seriation	: School-age children are capable of sequencing and ordering objects with respect to some measurable dimension, such as weight or size. This process is called seriation.
Peer group	: A group of equals. Same-age, same sex children assemble into informal peer groups during the school age.

2.10 SUGGESTED READINGS

Devadas, Rajamal P. & N Jaya (1984) *A Textbook on Child Development*. Delhi: McMillan India Ltd.

Elkind, D. & Weiner, I. B. (1978) *Development of the Child*. New York: John Wiley & Sons, Inc.

Development During Early School Years (6-11 Years)

- Harris, C. A. (1993) *Child Development*. 2nd Edition. Minneapolis/St.paul: West Publishing Co.
- Hurlock, E. B. (1978) *Child Development*. 6th Ed. 7th printing 1985. McGraw Hill Book Co.
- Lefrancois, G. R. (2001) *Of Children: An Introduction to Child and Adolescent Development*. 9th Edition. Wadsworth
- Morgan, C.T, King, R. A. Weisz, J. R. & Schopler (1997) *Introduction to Psychology*, 7th ed. Seventh reprint. Tata McGraw-Hill India.

2.11 ANSWERS TO SELF ASSESSMENT QUESTIONS

SAQ 1: 1) d, 2) c, 3) a.

SAQ 2: 1) d, 2) b, 3) d, 4) b.

Endnotes

- ¹ Gold, R. (1983). Inappropriate conservation judgements in the concrete operations period. *Genetic Psychology Monographs*, 107(2), 189-210.
- ² Seigal, A. W. (1881) The externalization of cognitive maps by children and adults: in search of ways to ask better questions. In Leiben, L.S., Patterson, A.H. & Newcombe, N. (Eds.), *Spatial representation across the life span*. New York: Academic Press.
- ³ Shirley, L.L. & Reynolds, R. E. (1988). Effects of interest on attention and learning. *Journal of Educational Psychology*, 80(2), 159-166
- ⁴ Witkin, H.A., Oltman, P. K., Raskin, E. & Karp, S. A. (1971) *A manual for imbedded figures test*. Palo Alto, CA: Consulting Psychologists Press
- ⁵ Brown, A. L., Bransford, J. D., Ferrara, R. A. & Campione, J. C. (1983). Learning, remembering and understanding. In P. H. Mussen (Ed.) *Handbook of Child Psychology* (4th ed.), Vol-3. New York: Wiley.
- ⁶ Burke, A., Crenshaw, D., Green, J., Schlosser, M. & Strocchia-rivera, L. (1989). Influence of verbal ability on the expression of aggression in physically abused children. *Journal of the American Academy of Child & Adolescent Psychiatry*, 28, 215-218.
- ⁷ Grolnick, W. S. & Ryan, R. M. (1989). Parent styles associated with children's self-regulation and competence in school. *Journal of Educational Psychology*, 81(2), 143-154
- ⁸ Baumrind, D. (1971). Harmonious parents and their preschool children. *Developmental Psychology*, 4, 99-102.
- ⁹ Whaley, L. F. & Wrong, D.L. (1988) *Essentials of Pediatric Nursing* (3rd ed.). St. Louis: C. V. Moseby.
- ¹⁰ Hartup, W.W. (1983). Peer relations. In p. H. Mussen (Ed.) *Handbook of child psychology* (4th ed. Vol. 4): Socialisation, personality, and social development. New York: John Wiley, 103-106.
- ¹¹ Bronfenbrenner, U. (1970). *Two worlds of Childhood: U.S. and U.S.S.R.* New York: Russell Sage Foundation.
- ¹² Gottman, J. M. (1977). Towards a definition of social isolation in children. *Child Development*, 48, 513-517.
- ¹³ Selman, R. L. (1980) *The growth of interpersonal understanding*. New York: Academic Press.
- ¹⁴ James, W. (1892) *Psychology: the briefer course*. New York: Henry Holt.
- ¹⁵ Kohlberg, L. & Gilligan, C. (1971). The adolescent as philosopher: The discovery of the self in a postconventional world. *Daedalus*, 100, 1051-1086.
- ¹⁶ Hartshorn, h. & May, M.S. (1928-1930) *Moral studies in the nature of character*, Vol. 1. *Studies in deceit*, Vol. 2. *Studies in self-control*, Vol. 3. *Studies in the organisation of character*, New York: Mcmillan
- ¹⁷ Croake, J. W. (1969). Fears of children, *Human Development*, 12, 239-247.

UNIT 3 SCHOOLING AND DEVELOPMENT

Structure

- 3.0 Introduction
- 3.1 Objectives
- 3.2 School and the Life of Children
- 3.3 Basic School Skills- The 3Rs and A C
 - 3.3.1 Learning to Read
 - 3.3.2 Learning to Write
 - 3.3.3 Developing Math Skills
 - 3.3.4 Computer Skills
- 3.4 Teaching for Knowledge
- 3.5 Value Education
- 3.6 Other Subject Teaching
 - 3.6.1 Physical Education
 - 3.6.2 Teaching for Pleasure
 - 3.6.3 Educational Excursions
- 3.7 Let Us Sum Up
- 3.8 Unit End Questions
- 3.9 Glossary
- 3.10 Suggested Readings
- 3.11 Answers to Self Assessment Questions

3.0 INTRODUCTION

I have been amazed to discover that town-bred people seldom know the points of the compass, never know which way the sun goes round, cannot find out which side of the house is out of the wind, and generally destitute of knowledge which every cow or sheep possesses.

Bertrand Russell (1926: 178)

In the last two units, we have discussed physical, cognitive, social, moral and emotional development of children in middle childhood. One important characteristic of the development that we need to take note of at this point is that all the aspects grow and develop simultaneously. A physically maturing child is also maturing socially and cognitively, emotionally and morally. The development does not take place like a sequence where physical development precedes social development and when the child is mature socially and physically, then only other developmental milestones follow; instead a growing child grows in all respects at a time. Societies and families influence this development greatly. One way of molding and shaping child is schooling whereby intellectual and cultural resources are devoted to the formation of educated and civilised man.

Schooling is all about the development of abilities by explicit instruction. The concept of schooling refers to the institutionalised nurturance of children's abilities through

Development During Early School Years (6-11 Years)

education. Middle childhood is the appropriate time to develop skills through practice and planning. Secondary abilities (like writing and playing violin), differentiated from primary abilities (learning mother tongue and sense perception) need instruction and practice. Schooling refers to the formal methods adopted within a society to maximise the learning of secondary abilities. The group we are concerned with has already spent two years in kindergarten. They know little bit about reading, writing, and numbers; through nursery rhymes they already have their first lessons in singing, pronunciation and learning by heart. In this unit, we will discuss the contribution of schools to children's development between the kindergarten education and more specialised education after fourteen. What are the things they learn and what are the things they ought to learn? What are the things that are ideal for this age group to learn? In what ways schools can produce good human beings, good citizens without adopting cast iron rules?

3.1 OBJECTIVES

After reading this unit, you will be able to:

- Elucidate Aims of schooling;
- Describe the various forms of education at school;
- Explain Value education, physical education and performing arts;
- Analyse the order of various information and skills; and
- Describe the importance of educational trips and learning by doing.

3.2 SCHOOL AND THE LIFE OF CHILDREN

Writing about the education of young children, Russell (1926) has discussed the following aims of education:

- i) Cultivation of intelligence is one of the major purposes of education.
- ii) To discover special aptitudes in children so that they may be carefully developed in the later years.
- iii) Everybody should learn the base subjects which need not be further pursued by those who are bad at them. Two principles determine the curriculum in the early school years: First, what children ought to know. Second, order in which the subjects are to be taught - teaching the easiest subjects first.
- iv) Anything involving severe mental effort should not be undertaken before the age of seven.

John Dewey (1859-1952), an American philosopher, psychologist and educational reformer, intensely discusses the need of education to be centered at the life of the child. Education should adopt the spontaneous ways that the children themselves adopt to learn from their surroundings. Dewey strongly opposed the idea of 'drawing out' something from the minds of child. The young child, he writes, "is already running over, spilling over with the activities of all kinds. He is not purely latent being whom the adult has to approach with great caution and skill in order gradually to draw out some hidden germ of activity." The role of education is that of giving direction to their activities. Dewey has enumerated following instincts that one needs to recognise and shape by various facts, materials and conditions:

Social Instinct: shown in conversation, personal intercourse and communication.

Language Instinct: the simplest form of the social expression of the child- the greatest of all educational resources.

Constructive Instinct: the instinct of making, expressed first in play, in movement, gesture, and make believe and later becomes more definite, seeks outlet in shaping materials into tangible forms.

Investigation Instinct: the child has not much instinct for abstract inquiry. It grows out of the combination of the constructive impulse with the conversational. There is no difference for a child between experimental science and the work done in the carpenter shop.

Expressive Instinct or art instinct: grows out of the communicating and constructive instincts. It is their refinement and full manifestation. For example, they make the construction adequate, full, free and flexible, and give it a social motive.

Schooling should aim at providing a full bloom to the instincts in a healthy way. By recognising the fields of interest it furthers the development in the direction which may give a child purpose of life.

Self Assessment Questions

- 1) Which of the following is NOT the aim of schooling in middle childhood?
 - a) Cultivation of intelligence
 - b) Discovery of special aptitudes in children
 - c) The easiest subjects should be taught first.
 - d) Specialised subjects should be taught
- 2) The instinct to use paper and pencil shows primarily

a) Expressive instinct	b) Social instinct
c) Language instinct	d) Constructive instinct
- 3) Curiosity is another name for

a) Expressive instinct	b) Social instinct
c) Investigation instinct	d) Language instinct

3.3 BASIC SCHOOL SKILLS - THE 3RS AND A C

By the time a child is six years old he knows how to read and write; certain accuracy in sense-perception and rudiments of drawing, singing and dancing and a power of concentrate upon educational activities is developed. But the child will not be very perfect in all these respects at six years of age. Further teaching is required in all of them for some years to come.

3.3.1 Learning to Read

Reading is a basic intellectual skill that is associated with modern schooling. All the education is based on the ability to read what has been given in the books. A child's performance in other subjects also depends on the successful comprehension of what is written. Reading is taught in progressive steps. First, associating names for things

Development During Early School Years (6-11 Years)

develop before six years age. Second, alphabet and letter sound associations are learned. Next, the child learns to pronounce common letter groups. The reading of simple text follows it. A fifth and sixth grader is generally fluent in reading like an adult. Good reading includes clear pronunciation, adequate voice modulation, recognising the emotional overtones in text, recognising the pauses and maintaining adequate speed so that a listener may follow what is spoken to. These skills can be developed by enacting the literary works, like stories and dramas. There may be some pronunciation mistakes when a child reads a word for the first time, but as he learns how to pronounce it, it is not prone to be forgotten. It is learnt forever. Development in reading can differ for different learners. Poor reading comprehension can be improved with the help of some techniques. But some children may not be motivated enough to learn this intellectual skill at the beginning. Reading text may be extremely boring to them. For such children reading books of their interest at home by mother or father or other family members may be a better way to develop an interest for reading rather than forcing it through school work.

3.3.2 Learning to Write

Writing skills, like reading, are developed by practice and an organised plan. There are differences between various thinkers on how to teach writing. Some favour the spontaneous development through expression of thoughts and activities at school. Others favour the study of literature for developing good writing skills. The refined skills of writing, Dewey suggests, comes when the language instinct is appealed in social way. The child always has something in his mind to talk about, a thought to express. Reading and writing as well as the oral use of language may be taught on the basis of the fact that the language is guided by realities.

The other point of view, supported by Russell, considers reading of literature necessary for good linguistic skills to be developed. Russell believes that expression of thought in speaking and writing should come without effort, in spontaneous manner, but it is difficult in a society that has lost its primitive aesthetic impulses. In such societies it is essential to produce a habit of thought which can be generated by intimate knowledge of good literature. Reading of literature purports other objectives as well that we will discuss later.

However, there are some ways to encourage good writing skills:

Writing exercises should be based on the activities of children, either personal or classroom activities.

Children should know writing for different purposes takes different forms: to record ideas, to write something imaginative, to ask for information, to have fun and so on.

Before giving assignment, teacher should discuss the purpose of the work and can also give some points to be elaborated.

Once the child begins writing, it should not be interrupted.

Children should be given time for revision, to reorganise and re-evaluate the piece.

Display or publish all papers, avoid giving importance to top students.

Plan reading and oral exercises around writing activity.

3.3.3 Developing Math Skills

“Arithmetic is a bugbear of childhood - I remember weeping bitterly because I could

not learn the multiplication table” (Russell). But, Russell adds, if it is tackled gradually and carefully, there is no need of the sense of blank despair. In Russell’s views, arithmetic affords the natural introduction to accuracy. The answer to a sum is either right or wrong, never ‘interesting’ or ‘suggestive’. This aspect makes arithmetic an important element in early education. But its difficulties should be carefully graded. Not too much time at a stretch should be devoted to them.

The formal teaching of geometry and algebra begins only after middle childhood.

Success with numbers also improves the speed with other school work. Training computation skills with abacus to the groups of children from first graders to fifth graders have shown tremendous improvement in children’s ability to add, subtract and multiply. Teaching mathematics with concrete objects can bring more productive results than teaching through paper-pencils.

Self Assessment Questions

1) What do you mean by 3Rs in elementary education?

.....

.....

.....

2) What are the aims that reading skill fulfils?

.....

.....

.....

3) What steps will you take for the normal development of writing skills in the third and fourth grade students?

.....

.....

.....

4) Ask ten five grade students the words they find difficult to spell in Hindi and in English. Make a list of such words. On the basis of this list state,

- i) Do all children find the same words difficult?
- ii) What are the individual differences?
- iii) What are the differences between the difficulty in spellings in Hindi and in English?
- iv) Is there any relationship between writing correct spellings and intelligence? Elaborate with examples.

3.3.4 Computer Skills

Computer literacy has been added in schools as a basic skill together with reading, writing and arithmetic. There are two functions related to computers:

- Computer as a machine to be understood and mastered.
- Computers as an aid in teaching.

Development During Early School Years (6-11 Years)

For the first purpose, it need not be included as a subject to be taught. Children can be provided these machines and some time to explore these machines. Teaching of computers as a subject should not be started before fourteen. Children enjoy working with and exploring these machines. As a teaching aid, it is a source of tremendous information. Care should be taken regarding the content children can access to and time devoted. Around the age of 11 or 12 most of the children today are familiar with various operations and functions of computers. But these computing machines may cause severe problems in the normal physical and social development if children give too much time to them.

While computers certainly reinforce learning and provide opportunity to explore, they don't seem to accelerate the acquisition of knowledge (Greenfield, 1984)¹.

3.4 TEACHING FOR KNOWLEDGE

Development of intellectual faculties is based on the development of intelligence. Russell defines intelligence as including both actual knowledge and receptivity to knowledge. He suggests that it is not possible to train intelligence without imparting information. Without intelligence our complex modern world can not exist, still less can it make progress. Intellectual development depends on the curriculum of young children: What is taught and how? How can we take maximum benefit from curriculum to make the child learn, not for exams but for the pleasure of knowing?

We have already discussed arithmetic, reading and writing. In this section, we take the subjects like: geography, history, science and languages. The first is geography. Geography is all about places, lands, forests, trees, rivers, mountains, weather and all about our Earth. Children's first love for the knowledge of this kind can be seen in their love for trains, airplanes and traveling.

When they learn this subject only through books and question-answers, the natural curiosity to a vast area of knowledge is lost. The knowledge is difficult to be imparted by instruction without curiosity.

Geography should be taught partly through the pictures and tales about travelers, and partly by cinema, showing what a traveler sees on his journey. Geography should be given a large place in the teaching of young children. Later on, they should be given books with pictures, maps and elementary information about different parts of the world. They should be instructed to put together little essays about the peculiarities of various countries.

At a slightly more advanced stage, history can be introduced. It should follow after geography because the sense of time is rudimentary at first. It should be started with the illustrated stories of eminent personalities. Stories about Rani Laxmi Bai, Raja Ram Mohan Roy, S. Radhakrishnan, Ramanujam, Newton, Columbus, Darwin and others, will be extremely interesting to young children. Necessary simplifications, pictures and cinema, if possible, will make the history a favourite to the young minds. Visits to the places of historical importance will be educative. Care must be taken in teaching history to not to introduce topics interesting to elders before the child is mature to understand them.

Two aspects are first relevant and interesting for the children to know:

The general pageant and procession, from geology to man, from savage man to civilised man and so on.

The dramatic story telling of incidents which have a sympathetic hero.

History tells about the journey of man from the savage life to modern advances: the discovery of fire, writing and printing, cities and architecture, agriculture and industries, scientific and technological advances, land and air travel; the conquest of human race fighting against chaos outside and darkness within: the rise and fall of civilisations, wars and racial divisions between nations; and the true conquerors who dispelled the darkness within and without: Buddha and Socrates, Archimedes, Galileo and Newton, Ambedkar and Gandhi; history creates a link between individual and the entire humanity.

Science Teaching: The teaching of science is very basic at this stage. Formal teaching of proper physics and chemistry begins only after fourteen. The sections 'learning by doing' should be practiced by every teacher to develop true spirit of observation and experimentation. Teaching of science contributes to the development of imagination as much as the poetry and stories, if taught properly it can contribute more to imagination than poetry and stories. Knowing about the sun, the planets, some rudimentary interest in the functioning of machines, man and nature, man and his body and health, knowledge all these things lay a strong foundation for curiosity and aptitude for science.

Language Teaching: Teaching of languages should be started at the very young age. In childhood it is possible to learn to speak a foreign language perfectly which can be difficult to be achieved in later years. Teaching of language should be free from mental fatigue. It can be possible with the games which depend upon the understanding the language and answering the questions and solving the puzzles, and with plays and acting. Languages learnt at this time are learnt perfectly and with less waste of educational time than at any subsequent period.

Literature: Teaching of literature aims at: training for memory when children learn poems and text by heart and the development of sensitivity to the beauty of language in speech and writing. Learning by heart should be associated with acting. The play will be in their thoughts for along time. Good literature is intended to give pleasure and if children cannot derive pleasure from it they are not likely to derive benefit. But the content should be chosen carefully.

3.5 VALUE EDUCATION

Education should aim at developing ideal character. Ideal character can be assumed to have many virtues. Four characteristics discussed by Russell seem to encompass all the rest: Vitality, courage, sensitiveness and intelligence. All the four qualities can be made common by proper physical, emotional and intellectual care of the young.

i) **Vitality:** Vitality is rather a physiological than a mental characteristic; it is presumably always present where there is perfect health. Where it exists, there is pleasure in feeling alive, quite apart from any specific pleasant circumstances. It makes it easy to take an interest in whatever occurs and thus promotes objectivity, interest in outside world and power of hard work. Vitality is a safeguard against envy, because it makes one's own existence pleasant.

ii) **Courage:** courage is a major ingredient in a perfect character. Two forms of courage are: absence of fear and the power of controlling fear. Combination of self-respect with an impersonal outlook to life is the major requirements of universal courage. Parental love, knowledge, and art are some of the sources which take us beyond self. 'The perfection of courage is found in the man of many interests, who *feels* his ego to be but a small part of the world' (Russell, 46). This state can be achieved only when the instinct is free and intelligence is active.

Development During Early School Years (6-11 Years)

iii) **Sensitiveness:** It is assumed to be a corrective of mere courage. Courageous behaviour should not be based on ignorance. Sensitiveness belongs to emotions. If sensitiveness is to be good, the emotional reaction must be in some sense appropriate. Pleasant behaviour and sympathy are desirable forms of sensitivity.

iv) **Intelligence:** Intelligence is an aptitude for acquiring knowledge. This aptitude is acquired both by exercise and information. The objective of imparting information is fulfilled through subjects as we have already discussed. The aptitude for acquiring knowledge can be developed by giving direction to curiosity that is the foundation of intellectual life.

vi) Curiosity about general propositions shows a higher level of intelligence than curiosity about particular facts. Curiosity must be associated with the habits of observation, belief in the possibility of knowledge, patience and industry. These things will develop naturally with proper intellectual education. Open-mindedness and co-operation develops with the development of intelligence.

All the above values can create a society with ideal characters. These qualities cannot be imparted through books. It is where the personality of teacher is important. Emotions are contiguous in character. These values automatically pass from the teacher to a disciple if a teacher practice these values and sincerely works for their cultivation without making his disciples consciously aware of the exercise.

There is one more thing that we often hear of, i.e. discipline. Discipline and order are important. But it depends more on our aim. Dewey says, “If you have the end in view of forty or fifty children learning certain set lessons, to be recited to a teacher, your discipline must be devoted to securing that result. But if the end in view is the development of a spirit of social cooperation and community life, the discipline must grow out of and be relative to it”. In Dewey’s views, school classroom is just like a busy workshop where there is no silence, there is a certain disorder, confusion, bustle that results from activity. Deeper and wider discipline, Dewey added, lies in constructive work directed towards a purpose.

3.6 OTHER SUBJECT TEACHING

3.6.1 Physical Education

Physical education completes the education together with education for knowledge and education of values. Sport activities at this age fulfill two purposes: inculcation of values and fullness of growth. Being part of a team and working for a common aim naturally instills co-operation. Budding powers of children find a full bloom through physical movements. Physical education is not only about sports it is about health and hygiene also: inculcating good habits, personal cleanliness and how to safeguard oneself from common diseases.

3.6.2 Teaching for Pleasure

Dance and music are two recommended activities that are good for body and training for the aesthetic sense, besides being a great pleasure to children. “Collective dance is a form of co-operation that young children easily appreciate” (Russell). Singing should begin a little later than dancing because its rudiments are more difficult than dancing and because it does not give muscular delight like dancing. After nursery rhymes, they should learn beautiful songs. But more difficult singing should be reserved for older children and it should not be enforced.

3.6.3 Educational Excursion

Educational excursions or trips are meant to make children familiar about their surroundings, about processes involved in creating and producing the things that they use. How do they get things they eat? For this they need to know about agriculture. Teaching from books will never be complete until children see the process themselves. Stories about printing will be helpful only when they see the process. It is true about everything in their surrounding: from historical places to libraries; forests to fields, from villages to cities and so on. If the knowledge is imparted first through words and then children get an opportunity to see and experience, there will be the possibility that all the natural curiosity about the things to be learned has been lost. Words at this stage are still difficult to tell the children all the colors of life that they have before them. Small trips to nearby places will help a lot to maintain their curiosity and kindle their willingness to learn more. Dewey discussed an example of a child for whom it was very difficult to believe that the river Mississippi taught in the class is the same river that he sees everyday in his way to school. This difficulty can be related in conceptualising all that is in the books. If trips are not possible for certain topics, cinema and pictures can compensate for this.

3.7 LET US SUM UP

Middle childhood is the time for shaping children's abilities, giving proper direction to their curiosities and instincts, making them strong emotionally and intellectual. Children's mind is prepared to learn new skills, taking responsibilities and habits of observation. All these goals can be accomplished through schooling. Schooling is the process of preparing young minds for future life so that they can live a healthy, happy and useful life. The teacher is important for children at this stage. A teacher like an artist sets the notes of children's mental and emotional life perfectly. He acts like a leader who knows what decisions are going to be important for children. On the whole, in an efficient teacher's hands, the process of schooling prepare the child successfully for further specialised education.

3.8 UNIT END QUESTIONS

- 1) What should be aims of schooling in middle childhood?
- 2) What are the basic school skills that children acquire during middle childhood?
- 3) What subjects should be taught to the children at the ages between 6 to 12 years. Elaborate your answer with examples.
- 4) Write an essay on the contribution of schooling in the development of children. Contrast between ideal and practical state of affairs.
- 5) Write short notes on the following:
 - (i) Educational excursion (ii) teaching for pleasure
- 6) What do you mean by value education. Do you think that we need it now more than ever? In what ways do you recommend value education can be imparted?

3.9 GLOSSARY

Schooling	: the process of development of abilities by explicit instruction. The concept of schooling refers to the institutionalised nurturance of children's abilities through education.
------------------	---

Development During Early School Years (6-11 Years)

Social instinct	: natural urge in children expressed through conversation, personal intercourse and communication.
Language instinct	: the simplest form of the social expression of the child. Language instinct provides the greatest of all educational resources.
Constructive instinct	: the instinct of making. Expressed first in play, in movement, gesture, and make believe and later becomes more definite, seeks outlet in shaping materials into tangible forms.
Investigation instinct	: the child has not much instinct for abstract inquiry. It grows out of the combination of the constructive impulse with the conversational.
Intelligence	: refers to both actual knowledge and receptivity to knowledge.
Value education	: education aimed at the development of ideal character.

3.10 SUGGESTED READINGS

Dewey, John (2008). *The School and Society* (first published in 1900). New Delhi: Aakar Books

Mukunda, Kamala, V. (2009). *What did you ask at school today?* A handbook of child learning, Harper Collins Publishers India.

Russell, B (1926). *On Education: Especially in Early Childhood*. London: Unwin Paperbacks

3.11 ANSWERS TO SELF ASSESSMENT QUESTIONS

1) d) specialised subjects should be taught, 2) a) Expressive instinct 3) c) Investigation instinct

Endnotes

¹ Greenfield, P. M. (1984) *Mind and Media: the effects of television, video games and computers*. Cambridge, MA: Harvard University Press.

UNIT 4 IDENTIFICATION OF PROBLEMS IN SCHOOL CHILDREN AND REMEDIAL MEASURES

Structure

- 4.0 Introduction
- 4.1 Objectives
- 4.2 Exceptional Children
- 4.3 Learning Disabilities (LD)
 - 4.3.1 Characteristics of Learning Disabled Children
 - 4.3.2 Causes of LD
 - 4.3.3 Identification Process of LD
 - 4.3.4 Remedial Programme for LD
- 4.4 Mental Retardation (MR)
 - 4.4.1 Identification Process of MR Children
 - 4.4.2 Remedial Measures for MR
 - 4.4.3 Effective Teaching Strategies
- 4.5 Attention Deficit / Hyperactivity Disorder
- 4.6 Orthopedically Handicapped
- 4.7 Hearing and Visual Impairments
 - 4.7.1 Visual Impairments
 - 4.7.2 Role of the Teacher
- 4.8 Gifted and Talented Children
 - 4.8.1 Role of the Teacher
- 4.9 Integration
- 4.10 Let Us Sum Up
- 4.11 Unit End Questions
- 4.12 Glossary
- 4.13 Suggested Readings
- 4.14 Answers to Self Assessment Questions

4.0 INTRODUCTION

Schooling, we discussed in the previous unit, is the process whereby society provides its younger members means to live a cultured and happy life. Schooling as a formal institution contributes by intellectually, emotionally, socially and physically transforming children as responsible citizens and individuals. It systematically nurtures their curiosity and by teaching basics gives them a desire to learn more. This desire to learn more differentiates an educated from an uneducated. But all the children may not learn equally. The individual differences exist among them, we all know. But the degree of individual differences may be such which makes it mandatory to provide individualised educational program to facilitate learning. There exists a group of children for whom

Development During Early School Years (6-11 Years)

it is difficult to learn like an average children of the same age. Such children are called 'exceptional children' or 'children with special needs'. Education of these children is called 'special education'. The exceptionality may be positive or negative. On the one end of it we have 'gifted children' and on the other extreme we have 'children with learning disabilities' and other impairments. Children at both the ends find it difficult to adjust in their group in terms of learning or socially and emotionally. For an educator, it is important to find out the type of difficulty a child is facing. Early recognition of the problems and timely remedial measures could help the child in benefiting from the whole learning process.

In this unit, we will discuss problems in school children and what diagnostic and remedial measures should be taken by an educator to maximise the learning output of children with difficulties.

4.1 OBJECTIVES

After reading this unit, you will be able to:

- define Exceptional children
- describe children with physical handicaps and perceptual difficulties (blind and deaf);
- define Attention deficit and hyperactive children;
- describe Mentally retarded children;
- explain Diagnostic and remedial measures by educators; and
- analyse the issue of Integrated education and mainstreaming.

4.2 EXCEPTIONAL CHILDREN

Kirk (1972: 4)¹ defines an exceptional child as, "child who deviates from the average or normal child (1) in mental characteristics, (2) in sensory abilities, (3) in neuromuscular or physical characteristics, (4) in social or emotional behaviour, (5) in communication abilities, or (6) in multiple handicaps to such an extent that he requires a modification of school practices, or special education services, in order to develop to his maximum capacity".

From the above definition we come to know that

Exceptional children can not profit from the regular school program. Special methods and materials are required to teach them.

The exceptionality may be due to problems in vision, hearing, perceptual-motor, movement related, communication, intelligence, socio-emotional.

Exceptionality has a positive dimension (gifted or talented children) and a negative dimension (handicapped, learning disability, behavioural problems etc.).

There is another group of children referred as *children at risk*. Such children have no learning disability, but they are at a risk to develop it later. The risk factor may be caused by conditions during birth, nurturing, or environment. This group includes students experiencing learning, socialisation and maturational difficulties and difficulties in general classroom.

Special education is defined as individualised educational instruction designed to meet the unique educational and related needs of students with disabilities.

Identification of Problems in School Children and Remedial Measures

Special education is provided for the following groups of students:

Group A

- 1) Learning disabled
- 2) Speech or language impaired
- 3) Mentally Retarded
- 4) Emotionally or behaviourally disturbed
- 5) Physically impaired
- 6) Autistic
- 7) Deaf-Blind
- 8) Traumatic brain disordered
- 9) Severely Multiple handicapped

Group B

Gifted and talented

Self Assessment Questions 1

Choose the right sentence

- 1) Special educational programs will be required for
 - a) Children with learning disabilities
 - b) Physically impaired children
 - c) Emotionally and behaviourally impaired children
 - d) All of the above
- 2) Exceptional children are those who
 - a) Can profit from the regular school program
 - b) Can not profit from the regular school program and the deviations can be positive or negative
 - c) Only those who deviate positively from the average same age group children
 - d) Only those who deviate negatively from the average same age children
- 3) An educator should aim at
 - a) Discouraging individual differences
 - b) Carefully observing the degree and kind of individual differences and designing individual program to suit the needs of children
 - c) Only b
 - d) Both a and b

4.3 LEARNING DISABILITIES (LD)

Pioneering work to define the nature and causation of the concept learning disability is credited to William Cruickshank in 1950s and 1960s. Samuel Kirk, in 1968, officially sanctioned the term *specific learning disability*.

Learning disability (Reber and Reber, 2001: 391) is “a syndrome found in children of normal or above intelligence characterised by specific difficulties in learning to read (dyslexia), to write (dysgraphia) and to do grade appropriate mathematics (dyscalculia)”.

LD children may show following characteristics (learning disability is often abbreviated as LD):

- LD is a chronic condition of probable neurological origin
- It varies in its manifestation and severity
- It influences individual’s self-concept
- It primarily excludes other disability categories
- An untreated or poorly treated LD can have adverse effects on educational, vocational, social and activities of daily living.
- LD can also be defined as one or more significant defects in essential learning processes.

4.3.1 Characteristics of LD Children

The characteristics of the learning disabled children are:

- LD is a mixed group of disorders.
- Learning disability may transcend the school setting and persist in adulthood
- LD children are normal in intellectual functioning. LD mainly lies in their way of learning and in their perceptual systems.
- Behavioural problems are not initial components of their behaviour, they may feel frustrated due to the gap in learning but they might show emotional problems.
- Boys are more likely to be characterised as LD than girls.
- LD may range from mild to severe. Some student may be passive or inactive, and other may show higher level of physical activity than other students.
- Students may show problem in one area not in the other.
- Delay in developmental milestones.

Behaviour and affective characteristics: hyperactivity or hypoactivity, act impulsively, may overreact with intense and surprising emotions which affect their social adjustment.

Disorders of attention: LD children show problems in sustaining attention (the ability to focus on information), easily distracted, have short attention span

Perceptual motor impairment: Students with learning disabilities often experience poor auditory and/ visual discrimination. They may show problems in directional orientation. They tend to be awkward, clumsy and uncoordinated. They often have poor handwriting.

Disorders of memory and thinking: problems in short or long term memory (acquiring and recalling information) and in metacognition. Metacognition is an ability to monitor and evaluate one's actions. Organising, categorising, arranging and planning will not be adequate.

Specific academic problems (especially in linguistic and calculation skills): LD children are often several years behind their peers in reading, comprehension, fluency and spelling, experience word, letter, number and sound reversals. *Dyslexia* is characterised by serious reading problems. LD students may have problems identifying words and understanding what they read. Oral and written language difficulties compound reading problems. Written language problems include poor handwriting, spelling, sentence structure, and composition skills. These students may have problems in recalling math facts, writing numbers legibly, learning arithmetic concepts and abstract math reasoning.

Disorders of speech and learning speech sounds: may repeat sounds, stumble over words and have halting speech; difficulties in understanding pragmatic aspects of language and also show word finding difficulties

Some central nervous system signs or irregularities

It should however be kept in mind that (i) all LD students do not share all the above characteristics; (ii) some of the above characteristics may be found in students who do not show LD.

4.3.2 Causes of LD

Environmental model holds poor learning environment, unstable families, disadvantaged environments and faulty school instruction responsible for LD. This model is important because improvement of LD according to this model lies in the change in environment: proper schooling and removal of unhealthy influences.

Brain Damage model suggests that 20 percent of students with LD have sustained brain damage or neurological damage. The term minimal brain dysfunction is often used because of the lack of proper neurological causes. It is assumed that the child may have experienced injury to central nervous system during birth or before birth.

Organic and Biological Model suggests that chemicals used in food coloring and flavoring substances, imbalances in neurotransmitters and vitamin deficiency (especially B complex) could cause LD. Developmental or maturation unpreparedness for certain tasks is also believed to underlie some LDs.

Genetic Model suggests an inherited genetic influence may be cause reading and language problems. More research is required to discover the relationship between genetic inheritance and specific LD.

The causes of LD may be embedded in the child as well as in the environment and may be complicated by organic, genetic or biological anomalies.

4.3.3 Identification Process of LD

Early detection or screening is dependent on early observation of behavioural and learning characteristics by class teacher who should possess the knowledge of the symptoms and characteristics of specific learning problems.

A multidisciplinary team including class teacher, school psychologist and other clinical personnel must determine the degree of disability.

Development During Early School Years (6-11 Years)

Measurements of achievement by teacher made tests, curriculum-based measurement and standardised test is highly recommended. The following tests are used for the assessment and identification of LD:

Wechsler Intelligence Scale for Children-III (WISC-III) for the assessment of cognitive abilities (Wechsler, 1993)².

Woodcock-Johnson Psycho-Educational Battery-Revised (WJ-III) for the assessment of achievement in reading, writing and mathematics by age and grade level (Woodcock & Mather, 1989)³.

Brigance Diagnostic Inventory of Basic Skills for the assessment of a variety of skill sequences in readiness, reading, language arts and math (Brigance, 1983)⁴.

4.3.4 Remedial Programs for LD

Individualised teaching program is required so that the child may get specific instruction in the areas of specific need, like reading, writing or math. Following methods are used as special techniques to teach the children with special needs:

Direct Instruction: This is a highly structured and organised teaching strategy which is started after the analysis of learning problems with specific learning tasks. It is carried on in steps with clear goals to be achieved at each step. Feedback and corrections are used and are shown to affect children's participation and performance positively. Together with DI, *cognitive instruction* is also used. CI emphasises attending, responding, rehearsing, recalling and transferring information.

Multisensory instructional strategies highlight learning by seeing, hearing, touching and movement.

Study skill training or meta-cognitive skills assist students in learning how to take notes and tests, prepare compositions, and remember to bring necessary materials.

Social skill training is used to help children in getting along with peers and adults in various settings and circumstances.

Inclusion strategies are the provisions by state and national authorities that students with learning disabilities should be educated with nondisabled students of their age. Additional instructional resources can be used for children with LD while teaching them in a general classroom. Teachers should make effort to adopt such methods as to enhance the understanding and participation of LD children with other children.

Peer mediated instruction and *computer assisted instruction* are the other methods used. For all these methods to be adequately implemented, it is extremely important that the classroom teacher and school psychologist should be sensitive to the problems and needs of such children and provide appropriate educational settings to LD children.

Self Assessment Questions 2

- 1) Write the specific learning difficulties that the following terms denote:
 - a) dyslexia
 - b) dysgraphia
 - c) dyscalculia

- 2) Assertion (R): LD is defined as one or more significant defects in essential learning processes.

Reason (R): LD children are normal in intellectual functioning. LD mainly lies in their way of learning and in their perceptual systems.

- a) Both A and R are true and R is correct reason for A.

.....
.....

- b) Both A and R are true. R is not a correct reason for A.

.....
.....

- c) A is true. R is wrong.

.....
.....

- d) A is wrong. R is true.

.....
.....

- 3) State whether true or false

- a) Students may show problem in one area not in the other.

.....

- b) LD is a chronic condition of probable neurological origin.

.....

- c) WISC-III is used for the assessment of writing and mathematics.

.....

- d) Inclusion strategy should not be emphasised by an educator.

.....

4.4 MENTAL RETARDATION (MR)

A child who scores below 70 on a standardised IQ test and have significant difficulties adapting to his environment is considered mentally retarded. Classification of MR is based on severity: mild, moderate, severe and profound.

The concept of mental retardation “is based purely on IQ test scores; no judgments are made about origins or causes, about emotional, motivational, social or familial factors, or about prognosis” (Reber & Reber, 2001: 430). The terms like educable mentally retarded and trainable mentally retarded are based on the causation of MR.

Causes are divided into two broad categories: physical and cultural/familial causes. Physical causes include genetic and chromosomal disorders and brain damage that occurred prenatally (due to disease, malnutrition, drug exposure), during birth, or

Development During Early School Years (6-11 Years)

postnatally (due to accident or illness). Almost all cases of severe and profound mental retardation have physical causes. Cultural familial causes are more insidious. The child with cultural familial retardation shows no brain damage but may come from deprived environments and from environments that have dysfunctional elements.

Persons with retardation are unable to make adequate degree of adjustments to many life circumstances because of their limited intellectual and adaptive capacities.

4.4.1 Identification Process MR children

Two types of assessments are required for children to be identified as retarded: intelligence and adaptive behaviours. A student may not be labeled on the basis of one test. Comprehensive testing includes observation of behaviour by teacher, curriculum based assessments, interviewing and standardised tests.

Some of the widely used intelligence tests are: the Stanford-Binet Intelligence Scale (Thorndike, Hagen & Sattler, 1986)⁵, The Revised Wechsler Intelligence Scale for Children –III, The Kaufman Assessment Battery for Children (K-ABC)⁶

Checklist are used to assess adaptive behaviour. Some frequently used checklists are:

*The Vineland Adaptive Behaviour Scale*⁷: questions in this checklist are related to age appropriate self-help, locomotion, communication, occupation, socialisation and self-direction skills.

The Adaptive Behaviour Scale-Public School Version (ABS-PS): This scale is an outgrowth of a project begun in 1965 by Parsons State Hospital and the American Association on Mental Retardation to develop a measure of adaptive behaviour to be used for patients with disabilities. It was revised in 1974 by Lambert in order to use it public school children (Lambert, Mihira & Leland, 1993)⁸. Using class teacher as informant, this test measures: independent functioning, physical development, economic activity, language development, economic activity, language development, numbers and time, vocational activity, self-direction, responsibility and socialisation are included in Part I. Part II measures violent and destructive behaviour, antisocial behaviour, rebellious behaviour, withdrawal, stereotyped behaviour, odd mannerisms, inappropriate interpersonal manners, unacceptable vocal habits, unacceptable tendencies, hyperactive tendencies, psychological disturbances and medication use.

4.4.2 Remedial Measures for MR

Services for children with mental retardation begin with *early intervention programs* that focus on providing guidance for families. *Preschool programs* focus on school readiness and socialisation activities. *Regular classroom programs* for mild and moderate retardation provide individualised academic and other functional programs and interaction with nondisabled peers. *Resource room programs* are provided for remedial help to some students. *Self-contained classroom program* is provided to moderate and severely retarded children as a segregated classroom. The programs focus on age appropriate and developmentally appropriate skills.

The curriculum can be designed to meet the needs of children and should be organised around the behaviours and information needed for adequate functioning. It should also accommodate traditional subjects, such as reading, arithmetic, science, health and other subjects to facilitate proper adjustments. *Full inclusion programs* and *individualised education programs* are both used together to give better results.

Behaviour therapy programs are used to decrease disruptive and inappropriate behaviours and emotional disturbances. Behaviour modification techniques help students to attend the learning tasks, maintain attention and shape new learning behaviours.

4.4.3 Effective Teaching Strategies

- i) A teacher can use same instructional programs can be used for retarded children as used for non-retarded, but they may require more time and effort to learn.
- ii) The focus of the curriculum should be on functional tasks. For instance, functional reading may include signs for one student and sections of newspaper for another.
- iii) The teacher must have the knowledge of each student's ability so that programs could be designed to meet their individual needs.
- iv) The teacher must structure learning situation and reduce distractions.
- v) The teacher must present material clearly, sequentially and with positive reinforcement for correct responses.
- vi) In case of incorrect responses, the teacher should encourage the student to make further effort and reevaluate the program whether it is appropriate for the student.

4.5 ATTENTION DEFICIT/HYPERACTIVITY DISORDER

Attention-deficit hyperactivity disorder or ADHD is the term used to describe children whose ability to learn and profit from new experiences is impaired by their distractibility, impulsiveness, lack of concentration, restlessness, inappropriate talking and lack of regard for inappropriate situations (DSM-III-R, 1987).

ADHD children can be inattentive or hyperactive-impulsive. Following symptoms characterise a inattentive child:

- Fail to close attention to details leading to careless mistake.
- Having difficulty sustaining attention to tasks or to play activities.
- Having difficulty in listening what is being said.
- Having difficulty following through and completing homework assignments.
- Having difficulty in organising tasks.
- Avoiding tasks that require strenuous activity.
- Losing materials that are necessary for the tasks they need to complete.
- Easily distracted by extraneous activity.
- Forgetting schedules for daily activities.
- Hyperactive-impulsive children display excessive energy and are restless and agitated. They may show the following behaviours:
- Fidgets and squirms in seat
- Leaves desk or seat in the classroom at inappropriate times

Development During Early School Years (6-11 Years)

- Runs or climbs in situations when it is inappropriate
- Avoids engaging in quiet leisure activities
- Talks excessively
- Blurts out answers impulsively, often before the question has been completed
- Displays difficulty waiting in lines and taking turns
- Butts into conversations or other people's games, interrupting and intruding on others.

These symptoms must be persistent and extreme to the extent that the student cannot function adequately.

There is no agreement between professionals regarding the etiology of ADHD. It is viewed as a result of medical disorder rather than a pure behavioural problem. The neurological causes may be related to the structure of the brain, chemical imbalances, some functions of the brain or combination of these and other factors. Poor diet and poor parenting may underlie the disorder.

Following is one sequence for assessment and identification:

- Administering and collecting rating scales from relevant persons
- Orienting the family and the student to the evaluation
- Interviewing the student
- Administering standardised tests, such as IQ, achievement and continuous performance
- Conducting direct observations in several settings including school, community and home if possible.
- Interviewing the parents
- Conducting a medical evaluation
- Integrating all the data
- Giving feedback and recommendations to the team
- Programs for treatment and education of children with ADHD.

Medical management: involvement of a physician who determines whether or not medication may be effective for controlling hyperactivity.

Psychological counseling helps the student understand and cope with ADHD and the negative effects that often result even before the problem is recognised. It is most effective when the child's family is also involved.

The arrangement of the environment (classroom or school) in a manner that enhances the student's success. Teachers need to permit students to move when necessary and work where they can most effectively.

Educational planning accomplished most effectively by multidisciplinary team. Individualised education programs are designed to address the needs of the students with ADHD.

Behaviour management instruction helps the child recognise behaviours that interfere with normal functioning. Behaviour modification techniques are used to encourage and organise activities appropriate in a situation.

Identification of Problems in School Children and Remedial Measures

Self Assessment Questions

- 1) Write four strategies used to identify problems of students.

.....

.....

.....

.....

- 2) What is the difference between inattentive and hyperactive impulsive children?

.....

.....

.....

.....

- 3) What do you understand by individualised educational programs?

.....

.....

.....

.....

- 4) What help can be taken from computer assisted instruction for children with various disabilities. Would you recommend it for all the students without discrimination?

.....

.....

.....

.....

4.6 ORTHOPEDICALLY HANDICAPPED

Many muscle and bone disabilities in childhood create problems of adjustment in school and may also affect their education achievement.

Cerebral Palsy (CP) Palsy refers to the lack of muscle control and cerebral denotes brain.

Cerebral palsy is a disorder that affects movement and posture as a result of damage to those areas of brain that control movement. The brain injury, usually caused by oxygen deprivation, can occur prior to birth, during birth or soon after birth. Cerebral palsy is not a disease. It does not become progressively worse, nor is it infectious in any form. It is not hereditary. There are three types of cerebral palsy depending on which areas of are affected:

Development During Early School Years (6-11 Years)

Spastic: hypertonic form, characterised by stiff, tense, and poorly coordinated movements

Athetoid: low tone form, characterised by purposeless uncontrolled involuntary movements and contorted purposeful movements.

Ataxic: characterised by balance problems, poor depth perception, and poor fine and gross motor skills.

Mixed types of symptoms can also occur.

The problems associated with poor movement and balance skills may complicate educational activities. They may also show sensory and communication problems.

Other physical ailments are brain injury, poliomyelitis, muscular dystrophy, and multiple sclerosis.

Together with regular medication and health check ups these children may also need specialised instructional help and some technical equipment to assist them. But a teacher's effective strategies will be more required as the students live a stressful life due to the ailments. A teacher should take care of the following:

- i) The teacher should be familiar to the condition of the student. The information can be obtained from the parents or the student. Without adequate knowledge of the student's condition, strategies and programs will be difficult to be planned.
- ii) Permit the use of computers, calculators, watches that have database, recorders and other equipment that will facilitate learning.
- iii) Organise the furniture and other objects in the rooms so that the students with extra equipment (wheelchair, standing board, computers etc.) can move with ease.
- iv) Pace the lessons so that the student with a physical disability can have a rest time between lessons.
- v) Ensure that the student understands the directions well.
- vi) Have the student do assignments that are necessary, if he miss the school. Do not give him extra drill and practice.
- vii) Counselor or the mental health professionals can be approached for an advice. Teacher should support the student learn and should avoid making complaints to family.

4.7 HEARING AND VISUAL IMPAIRMENTS

A small percentage of school children do not hear or see well. Some children are born blind or deaf while other sustain injuries or illness/infections that affect their vision or hearing. The detection of mild to moderate sensory impairment is challenging. It often goes unheeded and the child may be misdiagnosed as mentally retarded.

Hearing loss is much common than blindness. The most severely affected area of development for a person who is hearing impaired is the comprehension and use of oral language. Hearing impaired child will not develop language without extensive training. It is difficulty to measure such children on intellectual abilities which further makes it complicated to design an educational program for them. Five basic educational options are available to students with learning impairment:

- i) Full time placement in a regular classroom
- ii) Part time placement in a regular classroom and part time placement in a special educational classroom
- iii) Special class placement in a regular school
- iv) Separate day school placement
- v) Separate residential school placement.

Academic curriculum for the hearing impaired may be same as the hearing students. Teachers can use specific methods to teach them. But, for one reason curriculum may not be the same for such students as they might have started their formal later than the normal students. The educational approaches for hearing impaired significantly than normal hearing children. Oral / aural approaches emphasise oral language as a means to transfer information. For the students who are hard of hearing oral language is used and amplification in the form of hearing aids and other sensitive amplification devices are employed. Students are encouraged to use their voices when they speak. Manual approaches rely more exclusively on sign language and non-oral means to communicate information to students. The use of sign languages as a means of instruction is currently being preferred in all educational programs for hearing impaired. Audio-verbal training is also provided to students to make better use of their residual hearing. Many students with hearing impairments have more auditory potential than they actually use. Speech reading, cued speech, sign language, finger spelling and total communication are the approaches used. Technical devices like cochlear implants, computers and assistive communication devices will also prove greatly beneficial. Teachers after choosing appropriate methods, approaches and technical assistive devices, should keep in mind that

- i) If interpreter is used, the general lesson will be discussed with the interpreter before delivery in the class.
- ii) Face the student when speaking; don't speak when facing the blackboard.
- iii) Use videotapes and films with captioning
- iv) If using sign language, wear clothing that contrasts with you skin colour.
- v) Have a system in place for identifying cues in schools that are only conveyed by sounds, such as bells, fire alarms and intercom announcements.
- vi) Be aware of the extraneous noises in the classroom that can be distracting for the students with hearing aids.
- vii) Allow the students to move freely about the class room so that they can speech-read from other students as well as the teacher.
- viii) Make sure that the classroom is well lit with the light on your face not behind you.

The most important task for educators is to develop methods to determine which approach may be more suitable to provide the student the best educational opportunity to learn. So far, it has been observed that some students become frustrated with oral instruction while other students may develop some oral skills with this approach.

4.7.1 Visual Impairments

The blind students have severely impaired vision. They must be taught to read by Braille. Partially sighted can use magnifying glass to read print or they can use books with larger prints.

Development During Early School Years (6-11 Years)

Following needs in various areas for visually impaired children have been identified:

Needs of students with visual impairments

Concept Development and academic skills Maximum use of vision, determination of learning mode, academic support, listening skills, organisation and study skills,	Communication skills Handwriting, use of Braille writer, use of slate and stylus, use of word processors, use of adaptive equipment, note taking skills
Social/emotional skills Knowledge of self, knowledge of human sexuality, knowledge of others, interaction skills	Sensory motor skills Development of gross motor skills, fine motor skills, identification of textures tactually and underfoot, identification of kinesthetic sources, identification of olfactory sources
Orientation and mobility skills Development of body image, concrete environment, spatial concepts, directional concepts, traffic control, use of long cane, public interaction skills, independent travel in a variety of environments	Daily living skills Personal hygiene, eating, dressing, clothing care, money identification and management, use of telephone, time and calendar activities, knowledge and use of community services
Career and vocational skills Awareness of works people do, awareness of works that visually impaired can do, laws related to employment, work experience	

4.7.2 Role of the Teachers

- i) Teachers should eliminate the clutter in the classroom so that the students can move without hurdles. Make tactile map of the classroom, school and other places so that the student will know how to easily move through the areas.
- ii) Allow the student with visual impairment to use a computer with a speech synthesizer. Braille printer may be useful for proof reading.
- iii) Teacher should learn some braille. Students do not spell words in letter to letter correspondence with English.
- iv) Other students can read assignments for visually impaired that are not available in Braille. Audio tapes can also be prepared for such assignments.
- v) Recognise that some vocabulary words mean nothing to a person who has never seen them.
- vi) If the student has some vision, use large print with lots of contrasts such as black letters on yellow paper.

4.8 GIFTED AND TALENTED CHILDREN

Lewis Terman (1925), in a classic study on the development of intelligence, followed the development of more than 1500 children who scored genius range of intelligence. From his findings and others, an agreed on definition of giftedness has evolved. Gifted children are those who demonstrate achievement or potential in any of the following areas, singly or in combination:

- i) General intellectual ability (high IQ or achievement test scores)
- ii) Specific academic aptitude (excellence in certain subject areas such as mathematics or science)

- iii) Creative or productive thinking (the ability to discover new things and find new alternatives, the ability to look at life in new ways)
- iv) Leadership ability (the ability to help solve problems)
- v) Visual or performing arts (talents in art, music, dance, drama and related disciplines)
- vi) Psychomotor ability (excellence in sports).

Gifted children come from all levels of society, all races and all ethnic groups. Gifted children process information differently than non-gifted children. Options for educating gifted children include early admission to school, acceleration and enrichment.

Some gifted children may have trouble in social adjustment and may also show emotional disturbances. They may also feel boredom with regular curriculum. High development rates may be perceived by other children as showoff.

If the talent of some gifted children is not nurtured and developed through guidance and enrichment, it will be a great loss to society as well as the individual who might have a successful and happy life otherwise.

Enrichment is an attempt to broaden a child's knowledge by a variety of methods. It refers to the attempts made by the teacher within the classroom setting to add depth, detail and challenges to the curriculum for students at a given age. Special activities may be provided like independent study with advanced text or independent small projects. To be successful enrichment activities need a purpose and specified outcomes. These activities should be well planned and organised keeping in view the talent of the student and his maturity level; otherwise these will be boring and useless to the children.

4.8.1 Role of the Teacher

- i) Teacher should readily provide resource materials like reference books and computers.
- ii) Allow students to express their interests in the subject being taught in the class
- iii) Students who have done extra research on subjects should be allowed to display it to others.
- iv) Divergent thinkers should be allowed to speak and add to the class discussion. Then guide them to find more information.
- v) Guest speakers may be called on to speak on a subject of particular interest
- vi) Praise and encourage novel ideas and ways of completing assignments
- vii) Student may be allowed to go to advanced classes, when the subject of his interest has been taught, where he had already excelled by self-study.
- viii) Arrange the reading materials in the libraries to be used by the students
- ix) Provide training to the artistic talents like music and painting or other arts.
- x) Ensure that the gifted and talented student has a firm grasp of the core material as well as the enrichment curricula.

4.9 INTEGRATION

During the past few centuries, schooling and educating the exceptional children have seen a movement of inclusion the children with problems (physical, behavioural, social, perceptual, learning or intellectual) in the same classroom and school settings with their peers. Integration is a process of providing equal opportunities to all the children by equalising and mainstreaming, thus eradicating the pain caused by exclusion. The assumption behind the integrated schooling is that of the refining instructional procedures to such a limit that they can be made suitable to each and every student's needs. Secondly, while exceptional children learn and are educated with the normal children, their needs may be fulfilled by individualised instruction programs, providing the equipments and materials as per their requirements. The teacher must be sensitive to the abilities and disabilities of children and trained to attend various problems in school children.

4.10 LET US SUM UP

In this unit, we discussed about the problems that may be faced during school years. Schooling a process of imparting knowledge, sharpening cognitive tools and shaping a person socially and emotionally. But we know that the process of learning is not the same to all the children. Some children learn slowly and some learn very fast. Both the groups on the extreme are included in the exceptional children. We discussed children with learning disabilities, visual and hearing impairments, attention and hyperactivity disorders, orthopedically handicapped children and mental retardation. Apart from these, there are children with emotional and social disturbances and language, speech and communication disorder. Gifted children represent the small group of talented children who strongly need enrichment activities so that their talents could be nurtured.

All the impairments interfere with the normal educational achievement and social adjustment. A teacher's role is important in diagnosis, and more than that, in designing individualised instructional programs. Care must be taken not to generalise and misdiagnose any condition. Schooling deals directly with the most sophisticated thing in the world, i.e., the human mind. So every activity, inch by inch, should be well planned and organised.

4.11 UNIT END QUESTIONS

- 1) What do you mean by learning disability? What are the instructional procedures used for students with learning disability?
- 2) What is cerebral palsy? What kind of instructional scheme could be followed for the student who finds it difficult to read and write?
- 3) What do you mean by mental retardation? How MR children can be integrated into a normal school? What would be specific things that a teacher should take care of?
- 4) What is ADHD? Write an essay explaining the specific programs for such children in school and in families.
- 5) How societies on the whole can be made responsible to take care of children and to provide all the children equal opportunities to grow, develop and learn?

- 6) How could inclusion programs benefit students with hearing and visually impaired children?
- 7) What kind of enrichment programs can be designed to benefit gifted and talented children?
- 8) Write short notes on the following:
 - a) Enrichment,
 - b) Integration,
 - c) Special Education

4.12 GLOSSARY

Exceptional children	: children who deviate from the average or normal child in mental characteristics, sensory abilities, neuromuscular or physical characteristics, social or emotional behaviour, in communication abilities, or in multiple handicaps to such an extent that he requires a modification of school practices or special education services, in order to develop to his maximum capacity.
Special education	: individualised educational instruction designed to meet the unique educational and related needs of students with disabilities.
Learning disability	: found in children of normal or above intelligence characterised by specific difficulties in learning to read (dyslexia), to write (dysgraphia) and to do grade appropriate mathematics (dyscalculia).
Mentally retarded	: A child who scores below 70 on a standardised IQ test and have significant difficulties adapting to his environment is considered mentally retarded.
Attention-deficit hyperactivity disorder (ADHD)	: children whose ability to learn and profit from new experiences is impaired by their distractibility, impulsiveness, lack of concentration, restlessness, inappropriate talking and lack of regard for inappropriate situations.
Enrichment	: an attempt to broaden a child's knowledge by a variety of methods. It refers to the attempts made by the teacher within the classroom setting to add depth, detail and challenges to the curriculum for students at a given age.
Integration	: a process of providing equal opportunities to all the children by equalising and mainstreaming, thus eradicating the pain caused by exclusion.

4.13 SUGGESTED READINGS

Dash, M. (2005). *Education of Exceptional Children*. New Delhi: Atlantic Publishers & Distributors.

Development During Early School Years (6-11 Years)

Hallahan, D. P., Kaufman, J. M. & Lloyd, J. W. (1985). *Introduction to Learning Disabilities*. Second Edition. Englewood Cliffs NJ: Prentice Hall, Inc.

Reber, A. S. & Reber, E. (2001). *The Penguin Dictionary of Psychology*. Third Edition. Penguin Books

Skinner, C.E. (ed.) (2001). *Educational Psychology*. Fourth Edition. New Delhi: Prentice Hall of India.

A Teacher's Handbook on IED (1988), NCERT, New Delhi.

4.14 ANSWERS TO SELF ASSESSMENT QUESTIONS

SAQ 1: 1) d, 2) b, 3) c.

SAQ 2: 2) a, 3) True, True, False, False

Endnotes

¹ Kirk, S. A. (1972). *Educating Special Children* (2nd Ed.). Boston: Houghton Mifflin.

² Wechsler, D. (1993). *The Wechsler Intelligence Scale for Children-III*. San Antonio, TX: Psychological Corporation.

³ Woodcock, R. W. & Mather, N. (1989). *The Woodcock-Johnson psycho-educational Battery-revised*. Allen, TX: DLM Teaching Resources.

⁴ Brigance, A. (1983). *Brigance Diagnostic Inventory of Basic Skills*. North Billerica, MA: Curriculum Associates.

⁵ Thorndike, R. L., Hagen, E. P., Sattler, J. M. (1986). *Technical Manual: The Stanford-Binet Intelligence Scale* (4th ed.). Chicago: Riverside.

⁶ Kaufman, A. & Kaufman, N. (1983). *Kaufman Assessment Battery for Children, interpreting manual*. Circle Pine, MN: American Guidance Service.

⁷ Sparrow, S. S., Balla, D. A. & Cicchetti, D. V. (1984). *Vineland adaptive behaviour scales: Interview edition, survey form manual*. Circle Pines, MN: American Guidance Service.

⁸ Lambert, N. K., Mihira, K., & Leland, H. (1993). *Adaptive Behaviour Scale-School* (2nd ed.). Austin, TX: PRO-ED.

UNIT 1 PHYSICAL CHANGES

Structure

- 1.0 Introduction
- 1.1 Objectives
- 1.2 Adolescent Development
 - 1.2.1 Meaning and Definition
 - 1.2.2 Early Adolescence (12-14 years)
 - 1.2.3 Middle Adolescence (14-17 years)
 - 1.2.4 Late Adolescence (17- 19 years)
- 1.3 Physical Development
 - 1.3.1 Puberty
 - Adolescent Males
 - Adolescent Females
- 1.4 Let Us Sum Up
- 1.5 Unit End Questions
- 1.6 Suggested Readings

1.0 INTRODUCTION

Adolescence can be understood as a phase of transition from child to an adult. This period generally extends from 12 to 19 years of age, which is broadly categorised into three stages, viz., early adolescence, middle adolescence and late adolescence. Teenagers experience some physical milestones as they move from childhood to adolescence. Normal growth during adolescence includes both an increase in body size and sexual maturation (puberty).

During adolescence, boys and girls reach adult height and weight. Adolescence is the time for growth spurts and puberty changes. An adolescent may grow several inches in several months followed by a period of very slow growth, and then have another growth spurt.

Puberty happens to all individuals, whether boys or girls. In girls, it may start at the age of 9 or 10 and in boys it may begin around 12 or 13 years, although there is variation in the age from one person to the other. Girls experience puberty as a sequence of events, but their pubertal changes usually begin before boys of the same age.

In this unit, we will discuss the various physical development that takes place during adolescence and some ways to understand the complex nature of teens.

1.1 OBJECTIVES

After going through this unit, you will be able to:

- define the meaning and definition of adolescent development;
- describe the physical changes occurring during adolescence;
- explain some of the reactions to the physical changes during adolescence; and
- analyse the factors that contribute to these physical changes.

1.2 ADOLESCENT DEVELOPMENT

1.2.1 Meaning and Definition

Adolescence is the phase of transition from being a child to an adult. It extends from 12 to 19 years of age and it can be broadly categorised into three stages – early adolescence, middle adolescence and late adolescence. This transition involves biological (i.e. pubertal), psychological and social changes. Just before reaching adulthood, the youngster's behaviour seems to be confusing to parents. Parents find this to be a stormy period because it appears, as if there is nothing that parents say or do is right for the adolescents.

1.2.2 Early Adolescence (12-14 years)

Early adolescence is a contradictory phase. It is a phase when the child is not yet mature and at the same time she is no longer a child. They insist that they have grown up enough to be independent, while parents do not provide them much freedom. This is the time the youngster finds the drastic physical changes as a source of irritation. Some who are physically not well grown feel somewhat inferior to others. There is a fear that they may remain short and small and become the target of ridicule of the peers. There is a lot of confusion, hesitation and a search for one's own real identity. This arises due to the fact that though physically they look like an adult, mentally they are still children. Parents and elders treat them at one time as a grown up and at other time as a child. This causes problems in identity – as to 'Who am I?' and 'What am I?' etc.

Adolescence is the time when all of a sudden the world starts looking different. The youngster faces considerable competition. The sheer innocence of friendship is lost. Several new kinds of fantasies beyond the fun fantasy of Tom and Jerry start taking a toll on the mind of the youngster. This is the time when the individual needs understanding parents. This is the time in their life when they start thinking about their future.

1.2.3 Middle Adolescence (14-17 years)

Middle adolescence is the phase, when a child is on the road to transformation. There are whole lot of changes that occur, be it, physical, mental, cognitive or sexual. While most of the girls cross their puberty stage, boys are still on the road of maturing physically. It is that time of life, when the young individual is most concerned about one's look, body and appearance. Middle adolescent is the time when, the teenagers are developing their unique personality and opinions.

Friends play a pivotal role during these years. Young teenagers take great care to maintain their identity in the peer group.

Competitiveness also becomes a major priority in the life of middle teens. Many of them try to analyse the experiences they are going through and try to understand their inner turbulence by writing diaries and journals. Remember, middle teens are more capable of setting goals. However, the goals they set are often too high and as a result are unable to reach the goal and feel frustrated and disappointed. Withdrawal from the parents is also one of the key characteristics found in children of this age. That is they reduce their dependency on their parents and try to take decisions for themselves.

1.2.4 Late Adolescence (17-19 years)

A late adolescent is closer to adulthood and the youngster develops a firm identity and more stable interests. Soon to be adults they attain greater emotional stability and have a more developed sense of humor. They are able to delay their gratifications of their desires, and are able to think ideas through. They learn to express their feelings in words, compromise and make independent decisions. Unlike the earlier stages of childhood, late adolescents show greater concern for others. They become more self-reliant and take pride in their work. They start finalising their thoughts about the role they want to play in their lives and become more concerned about their future. Table below presents the details regarding heights and weights of adolescents during this period.

Table 1: Reference Body Weights and Heights of Adolescents according to NCHS

Age (Years)	Boys		Girls	
	Height (cm)	Weight (kg)	Height (cm)	Weight (kg)
12 +	147	37.0	148	38.7
13 +	153	40.9	155	44.0
14 +	160	47.0	159	48.0
15 +	166	52.6	161	51.4
16 +	171	58.0	162	53.0
17 +	175	62.7	163	54.0
18 +	177	65.0	164	54.4

This table gives an outline of average proportion of weight and height for both boys and girls in different age group.

1.3 PHYSICAL DEVELOPMENT

Adolescence is characterised by dramatic physical changes moving the individual from childhood into physical maturity. Teenagers experience some physical milestones as they move from childhood to adolescence. Normal growth during adolescence includes both an increase in body size and sexual maturation (puberty). The timing and the speed with which these changes occur vary and are affected by both heredity and environment.

During adolescence, boys and girls reach adult height and weight. Early, prepubescent changes are noted with the appearance of secondary sexual characteristics.

Adolescence is the time for growth spurts and pubertal changes. An adolescent may grow several inches in several months followed by a period of very slow growth, and then have another growth spurt. Changes with puberty may occur gradually or several signs may become visible at the same time.

There is a great amount of variation in the rate of changes that may occur. Some adolescents may experience these signs of maturity sooner or later than others. It is important to remember that these changes happen at different times for everyone. Being smaller or bigger than other girls or boys is normal as each child experiences puberty at his/her own time.

Sexual and other physical maturation that occurs during puberty results from hormonal changes. As the adolescent nears puberty, the pituitary gland increases the secretion of a hormone called follicle-stimulating hormone (FSH). This hormone then causes

Development During Adolescence

additional effects. In girls, FSH activates the ovaries to start producing estrogen. In boys, FSH causes sperm to develop.

The following are the average ages when puberty changes may occur:

Adolescent Males: Height: 4 to 12 inches

Age of Puberty: 9.5 to 14 years

First pubertal change: enlargement of the testicles

Penis enlargement: begins approximately one year after the testicles begin enlarging

Appearance of pubic hair: 13.5 years of age

Hair under the arms, on the face, voice change, and acne: 15 years of age

Nocturnal emissions (or wet dreams): 14 years of age

In boys, it is difficult to know exactly when he has reached puberty. There are changes that occur, but they occur gradually over a period of time rather than as a single event.

The following are additional changes that may occur for the male as he experiences the changes of puberty:

His body size will increase, with the feet, arms, legs, and hands sometimes growing “faster” than the rest of the body. This may cause the adolescent boy to experience a feeling of clumsiness.

Some boys may get some swelling in the area of their breasts as a result of the hormonal changes that are occurring. This is common among teenage boys and is usually a temporary condition.

Voice changes may occur, as the voice gets deeper. Sometimes, the voice may “crack” during this time. This is a temporary condition and will improve over time.

Not only will hair begin to grow in the genital area, but males will also experience hair growth on their face, under their arms, and on their legs.

As the hormones of puberty increase, adolescents may experience an increase in oily skin and sweating. This is a normal part of growing. It is important to wash daily, including the face. Acne may develop.

As the penis enlarges, the adolescent male may begin to experience erections. This is when the penis becomes hard and erect because it is filled with blood. This is due to hormonal changes and may occur when the boy fantasizes about sexual things or for no reason at all. This is a normal occurrence.

During puberty, the male sex organs begin producing sperm. Semen, which is composed of sperm and other bodily fluids, may be released during an erection. This is called ejaculation. Sometimes, this may happen while the male is sleeping. This is called a nocturnal emission or “wet dream.” This is a normal part of puberty and will stop as the male gets older.

Adolescent Females: Height: 2 to 10 inches

Age of Puberty: 8 to 13 years of age

First pubertal change: breast development

Pubic hair development: shortly after breast development

Hair under the arms: 12 years of age

Menstrual periods: 10 to 16.5 years of age

Girls experience puberty as a sequence of events, but their pubertal changes usually begin before boys of the same age. Each girl is different and may progress through these changes differently.

The following are additional changes that may occur for the female as she experiences the changes of puberty:

There may be an increase in hair growth, not only the pubic area, but also under the arms and on the legs.

The females' body shape will also begin to change. There may be not only an increase in height and weight, but the hips may get wider. There may also be an increase in fat in the buttocks, legs, and stomach. These are normal changes that may occur during puberty. Her body size will increase, with the feet, arms, legs, and hands beginning to grow in advance of the body. This may cause the adolescent girl to experience a time of feeling clumsy. As the hormones of puberty increase, adolescents may experience an increase in oily skin and sweating. Acne may develop.

Adolescent girls will also experience menstruation, or menstrual periods. This begins when the body releases an egg from the ovaries. If the egg is fertilized with a sperm from a male, it will grow into a baby inside the uterus. If the egg is not fertilized, the endometrial lining of the uterus is not needed and is shed through the vagina as fluid. The fluids are bloody and are usually released monthly. After a girl begins to menstruate, she is able to get pregnant.

Self Assessment Questions

1) Define and discuss the characteristics of each in brief:

a) Late Adolescence

.....

.....

b) Early Adolescence

.....

.....

c) Middle Adolescence

.....

.....

2) Complete the sentences

a) Adolescence is the phase of _____

b) They may lead to few health problems such as _____ during this stage.

Development During Adolescence

c) There is lot of confusion in this stage because _____

3) Describe the physical changes that occur during adolescence, in both males and females separately.

.....

1.3.1 Puberty

Puberty is the stage of life during which you become biologically and sexually mature. Puberty is the one to three-year process of hormonal and physical change that causes the young person to reach sexual maturity; girls usually enter it about a year earlier than boys. It is the entry into adolescence, a period of tremendous changes in the body, emotions, attitude, values, intellect and relationships. This is the transition from the world of the child that gives way to the world of the adult.

Puberty happens to all individuals – boys and girls. In girls, it may start at the age of 9 or 10 and in boys it may begin around 12 or 13 years, although there is variation in the age from one person to the other.

Puberty is often talked about as a period of turbulence and trials because the child begin to develop a sex drive, experience mood swings, develop relationships with people of the same and/or opposite gender, and face different kinds of pressure at home and at school. Change is always a difficult process, but is an inevitable part of life. Without change and without pain there is no journey, there is no quest, there is no progress. Holding on to the past can be comfortable and secure, and the future often appears uncertain; but tries to think of it as an exciting adventure into and with you.

Most adolescents feel that they do not get adequate information about the changes they are going through, and they feel that the adults around are not understanding. So there is worry, fear, and insecurity. However, feelings like this are normal during puberty.

Some of the greatest anxiety at this stage is about our physical body because it is changing and growing in new and uncertain ways; it appears to have a life of its own and nothing what we think or feel can stop its rate of change. Understanding these physical changes helps in realising that you are not alone in this journey, and will help the youngster make their way through the turbulent sea of adolescence.

There are some very visible and invisible changes that occur in an individuals body. Some changes occur silently without you realising them, and there are other more obvious changes that are loud and confusing. Though the external feeling is confusion or awkwardness, there is an internal chemistry that is in harmony, all changes are interconnected and proceed smoothly within. What it all reveals is the miracle of life and the mystery of the human body as it prepares itself for change and choice and growth.

Puberty in boys and girls begins in a tiny corner of the brain called the pituitary gland, chemical messengers called hormones are send to the reproductive organs

to release another set of hormones, which leads to changes in the body. In boys, the hormone that creates these changes is called testosterone, and in girls it is estrogen.

Adolescent Males: Changes in the male body start between the age of 12 and 14 years. Different boys react differently to the changes, and the changes happen at different times to all of us. This is reflective of our uniqueness, and since all of us are different there can really be no “standard” to compare ourselves to.

- i) *The penis:* The penis has two main parts, a head (tip or glans) and a shaft. The head of the penis, particularly its rim is much more sensitive than the shaft. The penis is used for two things, urinating and penetrative intercourse. Usually penises are not straight, some tilt to the left and others to the right. There is no need to worry about it.

Angle or tilt, all of us feel uncomfortable or insecure about how the penis is shaped and how it looks. To reproduce, the male penis must be inserted into the woman’s vagina where sperm (testicles) are released, which will eventually meet and fertilize the egg.

- ii) *Foreskin:* The penis is covered with fine loose skin. The skin that surrounds the head of the penis is loose and is called the foreskin. The foreskin usually does not fully retract for several years and should never be forced. The foreskin can be retracted when it’s inside surface separated from the glands and the opening widens. This usually happens by age 18. Once a boy discovers that his foreskin is retractable, he can easily learn to care for himself. When the Foreskin is fully retractable, it is important to wash underneath it everyday, so as to prevent SMEGMA (a white waxy substance consisting of natural secretions and shed skin cells) from forming. Good general hygiene and common sense are key to preventing infection and disease.
- iii) *The testicles:* Men have two testicles, which hang in a sack called the scrotum. The testicles produce tadpole-shaped sperm, which join with a woman’s eggs to make babies. Sperms are contained in fluid called semen. The scrotum hangs outside the body because sperm need to be kept cooler than your internal body temperature, to prevent them from getting damaged. The scrotum is usually darker in color than the surrounding skin. One testicle always hangs lower than the other, this is so that they don’t bash into each other when you are running or playing. The testicles are connected to the penis by a long thin tube. Both urine from the bladder and semen pass down this tube through the penis. This tube is called the urethra.
- iv) *Erections:* Normally a mans penis is soft and hangs down, but different kinds of sensations and feelings – physical, psychological, or sensual - can lead to an erection. An erection occurs when a nerve centre at the base of your spinal cord sends out impulses to your penis, filling it up with blood. At this point the penis gets stiff, grows longer and wider, sticks upward and outwards from the body and the foreskin stretches, leaving the head of the penis exposed. The muscles at the base of your penis tighten, so that blood can’t drain back out. There are no muscles in the penis itself, it is a kind of a sponge (that is why you can’t move it very much when soft!). Erections are unreliable and can come and go without warning.
- v) *Ejaculation:* Ejaculation is the emission of semen from the penis. This is essential for reproduction, and it also leads to a feeling of sexual pleasure – a combination of physical sensations and intense emotional feelings. During this time 3-15

Development During Adolescence

contractions occur. Each last about a second and the first three are usually the most intense. To achieve ejaculation there must be stimulation and erection of the penis. When a man ejaculates, he releases on average a teaspoonful of semen containing up to 300 million sperm. Ejaculation is not always voluntary. For example, sometimes, while sleeping men can ejaculate. Although the semen comes out of the penis through the urethra (through which urine too comes out), there is no chance of any urine coming out during ejaculation as a muscle closes the bladder off. After ejaculation, the semen is stored again at the base of the penis, until the next one.

While the male child is developing in the uterus, the testicles are already secreting the male hormone, testosterone, which after 13-14 years kick in and steer the baby towards becoming a boy and man. During childhood, the sex gland remains inactive and makes neither hormones nor sperm. During puberty, the testicles begin to be active again under the influence of a secretion from the pituitary gland, which is tucked away in a small part of the brain. The testicles produce testosterone, which is circulated throughout the body in the blood. Under its influence the boy is transformed into a man over a period of years.

Most changes in boys are all external and visible unlike with girls where most changes happen inside the body.

- vi) *The genitals:* It is commonly believed that the first sign of puberty is enlargement of the testicles. They may double or quadruple. At the same time, the skin of the scrotum changes, the colour deepens becoming darker and its texture gets wrinkled. Sometime after this the penis starts to enlarge, becoming first longer and then broader. The final size is reached at the end of your growth spurt, which usually happens when you are 15-16 years old, but sometimes earlier or later.
- vii) *Wet dreams:* During puberty a boy becomes ready to reproduce since he can now produce and release sperm. At this stage wet dreams occur often in nearly all boys. At night there is an involuntary release of semen (ejaculation) during sleep, either during an erotic dream, or sometimes even in the absence of an erotic stimulation. This happens because there is a build-up of semen in the body and it needs to be released.

Boys wake up in the morning to find a sticky or dry residue of semen on the sheet, which is embarrassing, awkward, and even frightening. Wet dreams are a signal that you are growing up, which stops after a while.

- viii) *Growth Spurt:* Boys begin growing later than girls and carry on for longer, after the girls have stopped growing. The growth spurt in boys begins around 13-14 years and ends at 16-17 years. There is a sudden increase in height and weight, the chest expands and becomes broader, and the arms and legs fill out and become more muscular. Due to the influence of testosterone the larynx (the voice centre in the throat) expands, and the voice cracks before it deepens. This is another awkward phase but it soon evens out to a voice cracks before it deepens. The aureole surrounding the nipples generally doubles in size during puberty. During this period hair starts growing on different part of the body, like legs, arms, chest, groin, armpits and face. Hair on face starts as a fine fuzzy layer and then becomes tougher and thicker as he starts shaving. Pimples, spots and blackheads may grow on face, neck, chest and back. These are by-products of androgens (male hormones that are responsible for most of the changes in adolescents' body).

- ix) *Body Odour:* The adolescents sweat glands (under their arms and in genital areas) are becoming more active. When sweat comes into contact with bacteria on the skin it creates an unpleasant smell, both in adolescent boys and girls.
- x) *Pimples:* The oil glands or 'sebaceous glands' produce an oily substance called sebum. If the sebum blocks the pores on the skin and combines with the bacteria, you can get pimples.
- xi) *Sexual Feelings:* During puberty and adolescence, sexual thoughts and fantasies become more frequent and become aware of sexual stimuli around. These sexual feelings and fantasies are also normal, and is common among all girls and boys at this stage.

Adolescent Females

Changes in the female body can be considered in terms of visible and invisible changes..

The invisible changes: There are some invisible change that happens in a young girl's body in their reproductive organs like ovaries, uterus and vagina. These are the changes that are also having an impact on the visible changes in her body.

- i) *Ovaries:* There are two ovaries in a young girls body, one on either side of the uterus and below the fallopian tube. These organs are located in the lower abdomen. Ovaries are about an inch long, approximately the size and shape of an almond and contain tiny egg cells. All the eggs are in a 'frozen' state before puberty. At puberty each ovary alternatively releases an egg or ovum every month, however sometimes two or more ova (the plural of ovum) may get released from the ovaries.

The hormone called estrogen is also produced in the ovary. The pituitary gland sends the message to the ovaries to produce this hormone. Estrogen is responsible for making a girl grow up to have a woman's body and make it possible for her to have children.

- ii) *Uterus:* The uterus is called a womb. Its an upside-down pear-shaped structure inside a women's abdomen, which is hollow and made of smooth muscles. This is where the baby grows, and during pregnancy the uterus expands to accommodate a full grown fetus (an unborn child). The uterus is wider at the top and narrows into a neck called the cervix, which opens into the upper end of the vagina.
- iii) *Fallopian Tube:* The fallopian tubes are called uterine tubes or oviducts. The two fallopian tubes are trumpet shaped and are located close to their respective ovaries. These tubes open on each side into the upper end of the uterus. The fallopian tubes pick up the eggs released in their respective ovaries and push it into the uterus and it takes 3 to 7 days for ovum to reach the uterus.
- iv) *Vagina:* The vagina is the passageway or a muscular tube extending from the cervix to the external genitals. The opening of the vagina is between the urinary opening and the anus. Every women has three opening in the genital area and these are :

Development During Adolescence

- a) urinary opening which is for the passage for urine
- b) vaginal opening which is for:
- c) passage for period/menstrual flow
- d) passage through which baby comes out at birth
- e) opening for sexual intercourse
- f) Male sperm travel through it to fallopian tubes.

The external genitals structure also consists of a clitoris, which is a small cylindrical body and is situated above the urinary opening. It exists to provide women with sexual pleasure.

Near the opening of the vagina is the porous membrane called the Hymen, it stretches from one wall of vagina to the other. The hymen tears or gets ruptured during the first penetrative sexual act (intercourse) and is accompanied with little bleeding and pain.

The visible changes: There are some visible changes in female body, these are discuss here:

- i) *The Growth Spurt:* There is sudden increase in height and the body fills out. The greatest increase in height occurs around 10 to 11 years for girls. A girl usually stops growing between 16-18 years. Along with height the young girls note changes in the pelvic bones and hips widening.
- ii) *Breast:* Breast will start to develop and will become larger and fuller. They enlarge with a deposit of fat, they become soft and rounded during this stage. Breasts have milk glands and milk tubes that open into the nipples.
- iii) *Hair Growth:* Youngsters can notice hair growing on their arms, underarms, legs, upper lips, etc. Hair grows in the pubic area, this is a V-shaped area above the vagina. This is called pubic hair and it is thicker, curlier and coarser than the hair on head.
- iv) *Body Odour:* The adolescents' sweat glands (under their arms and in genital areas) are becoming more active. When sweat comes into contact with bacteria on the skin it creates an unpleasant smell, both in adolescent boys and girls.
- v) *Pimples:* The oil glands or 'sebaceous glands' produce an oily substance called sebum. If the sebum blocks the pores on the skin and combines with the bacteria, the person can get pimples.
- vi) *Sexual feelings:* At this stage the young girls may start to feel sexually aroused, and spend time in a fantasy world thinking about love and sex. The movements of hormones inside make the youngster feel more sexual and the body is changing.

Self Assessment Questions

- 1) Define and discuss puberty.

.....

.....

.....

2) What are visible and invisible changes occurring during adolescence? Explain.

.....

.....

.....

.....

3) Discuss the following terms:

Growth spurt

Pimples

Sexual feelings

Body odour

1.4 LET US SUM UP

According to the study of the entire unit, we can understand that adolescence is the phase of transition from being a child to an adult. In this period teenage or adolescence is generally extended from 12 to 19 years of age and which is broadly categorised into three stages viz., early adolescence, middle adolescence and late adolescence. Adolescence is characterised by dramatic physical changes moving the individual from childhood into physical maturity. Teenagers experience some physical milestones as they move from childhood to adolescence. Normal growth during adolescence includes both an increase in body size and sexual maturation (puberty). There are several marked changes during this period in the lives of both adolescent males and females.

Boys and girls begin the growth spurt at different ages, girls, on average, begin two years earlier than boys and complete them earlier as well. Boys and girls also begin to go through puberty during adolescence. Menstruation is just one of several changes in puberty that are related to the development of primary and secondary sex characteristics. Boys' penises and scrotums begin to grow at an accelerated rate around age 12 and reach adult size 3 or 4 years later. Spermatarche occurs after boys' penises enlarge about the age of 13. Secondary sex characteristic development is characterised by growth of pubic hair and growth of underarm and facial hair. For girls, early maturation might offer increased popularity and an advanced social life, but they might also experience embarrassment over the changes in their bodies, which make them different from their peers. Late maturation can put boys at a distinct physical and social disadvantage, which can affect self-esteem and leave lasting, negative effects. Girls who mature late might suffer neglect by their peers of both sexes, but ultimately they appear to suffer no lasting ill effects and may even benefit from late maturation in the long run.

1.5 UNIT END QUESTIONS

- 1) Define and describe the period of adolescence.
- 2) What are the characteristic changes that take place during this period?
- 3) What are the changes that occur in the males during this period?
- 4) What are the changes that occur during this period?

1.6 SUGGESTED READINGS

Nielsen, Linda,(1996). *Adolescence: A Contemporary View*, (3rd edition) Harcourt Brace College Publishers.

Meese, Judith L. (2004). *Child and Adolescent Development for Educators*. (3rd edition). McGraw Hill College, USA.



UNIT 2 COGNITIVE CHANGES

Structure

- 2.0 Introduction
- 2.1 Objectives
- 2.2 Cognitive Development
 - 2.2.1 Cognitive Development in Adolescence
 - 2.2.2 Early Adolescence
 - 2.2.3 Middle Adolescence
 - 2.2.4 Late Adolescence
- 2.3 Piaget's Theoretical Approach on Cognitive Development
- 2.4 Information Processing Perspective
 - 2.4.1 Information Processing
 - 2.4.2 Information Processing Theory
 - 2.4.3 Information Processing Model
- 2.5 School Performance and Cognitive Development
- 2.6 Let Us Sum Up
- 2.7 Unit End Questions
- 2.8 Suggested Readings
- 2.9 Answers of the Self Assessment Questions

2.0 INTRODUCTION

Adolescence is the developmental stage between childhood and adulthood; it generally refers to period ranging from ages 12 through ages 19. Although its beginning is balanced with the beginning of puberty, adolescence is characterised by psychological and social stages as well as by biological changes.

Adolescence can be prolonged, brief or virtually non existent, depending on the type of culture in which it occurs. In societies that are simple, for example, the transition from childhood to adulthood tends to occur rather rapidly, and is marked by traditionally prescribed passage rites. Psychologists have discussed four areas that especially touch upon adolescent behaviour and development: physiological changes and growth, cognitive or mental development, identity or personality formation and parent- adolescent relations. In this unit, we will discuss on the cognitive development and changes during adolescence.

Cognitive development refers to the development of the ability to think and reason. It refers to how a person perceives, think, and gains understanding of his/her world through the interaction of genetic and learned factors. It takes a fast pace during adolescence. Teenagers accumulate general knowledge and start applying the learned concepts to new tasks.

During early adolescence, they use more complex thinking, they are focused on personal decision making in school and home environments. With some experience in using more complex thinking processes, the focus of middle adolescence often expands to include more philosophical and futuristic concerns. During late adolescence,

Development During Adolescence

complex thinking processes are used to focus on less self-centered concepts as well as personal decision making.

In the theory of cognitive development, Piaget discusses about the four distinct, universal stages, each characterised by increasingly sophisticated and abstract levels of thoughts. These stages always occur in the same order, and each builds on what has been learned in the previous stage.

Adolescents, ages 12 through 19, are and should be at the “formal operations” stage of Piaget’s cognitive development theory. It is characterised by an increased independence for thinking through problems and situations. Adolescents should be able to understand pure abstractions, such as philosophy and higher math concepts. During this age, children are able to learn and apply general information needed to adapt to specific situations. They are able to learn specific information and skills necessary for an occupation.

Adolescent egocentrism is also characterised by an imaginary audience with an increased self consciousness. They consider that their people around them especially peers observe their activities and may comment on them.

2.1 OBJECTIVES

After going through this unit, you will be able to:

- define and describe the meaning of cognitive changes that takes place in adolescence;
- describe the cognitive development during adolescent years;
- explain Piaget’s theoretical approach on cognitive development;
- describe the information processing perspective in cognitive development; and
- analyse the school performance and cognitive development during adolescence.

2.2 COGNITIVE DEVELOPMENT

The term “cognition” refers to all processes by which the sensory input is transformed, reduced, elaborated, stored, recovered, and used. It is concerned with these processes even when they operate in the absence of relevant stimulation, as in images and hallucinations. Cognitive psychology is a discipline within psychology that investigates the internal mental processes of thought such as visual processing, memory, thinking, learning, feeling, problem solving, and language.

Cognitive psychology is different from previous psychological approaches in two major ways: (i) It accepts the use of the scientific method, and (ii) It generally rejects introspection as a valid method of investigation. Unlike Freudian approach it does not believe in symbolism. It explicitly acknowledges the existence of internal mental states (such as belief, desire and motivation). It is believed that cognitive development takes place during adolescence at a more rapid pace and the ability to think, contemplate and analyse etc. become all the more sharp.

2.2.1 Cognitive Development in Adolescence

Cognitive development refers to the development of the ability to think and reason. It refers to how a person perceives, think, and gains understanding of his/her world through the interaction of genetic and learned factors. It takes a fast pace during

adolescence. Teenagers accumulate general knowledge and start applying the learned concepts to new tasks. Interest in learning life skills, such as cooking, fixing things, driving and so on, from adults at home and else where is also seen during these years. In terms of school, there is a great transition for the budding adult. As performance improves so does the individual's understanding of complex materials.

Adolescence is the developmental stage between childhood and adulthood. It generally refers to a period ranging from age 11 or 12 through ages 19 or 21. Adolescence marks the beginning development of more complex thinking processes called as formal logical operations. This includes (i) abstract thinking (thinking about possibilities), (ii) the ability to reason from known principles (form own new ideas or questions), (iii) the ability to consider many points of view according to varying criteria (iv) compare or debate ideas or opinions), and (v) development of the ability to think about the process of thinking. In addition to these, a sense of ego and personal uniqueness also develop in the youngster, who starts thinking that no one can really understand her/him.

Some common indicators of the youngsters progression from more simple to more complex cognitive development include the following:

2.2.2 Early Adolescence

During early adolescence, the youngsters are able to use more complex thinking. They are focused on personal decision making in school and home environments.

- They begin to demonstrate use of formal logical operations in school work.
- They begin to question authority and society standards.
- They begin to form and verbalize their own thoughts and views on a variety of topics, usually more related to their own life, such as:
 - which sports are better to play.
 - which groups are better to be included in.
 - what personal appearances are desirable or attractive.
 - what parental rules should be changed.

2.2.3 Middle Adolescence

With some experience in using more complex thinking processes, the focus of middle adolescence often expands to include more philosophical and futuristic concerns, including the following:

- They often question more extensively.
- They often analyse more extensively.
- They think about and begin to form their own code of ethics (i.e., What do I think is right?).
- They think about different possibilities and begin to develop their own identity (i.e., Who am I?).
- They think about and begin to systematically consider possible future goals (i.e., What do I want?).

Development During Adolescence

- They think about and begin to make their own plans.
- They begin to think on long term basis.
- The use of systematic thinking begins to influence relationship with others.

2.2.4 Late Adolescence

During late adolescence, complex thinking processes are used to focus on less self-centered concepts as well as personal decision making, which include the following:

- They start thinking more about global concepts such as justice, history, politics, and patriotism.
- They often develop idealistic views on specific topics or concerns.
- They debate and discuss a great deal and also show intolerance to opposing views.
- They begin to focus their thinking on making career decisions.
- They begin to focus their thinking on emerging role in adult society.

Adolescence can be prolonged, brief, or virtually nonexistent, depending on the type of culture in which it occurs. In societies that are simple, for example, the transition from childhood to adulthood tends to occur rather rapidly.

Adolescents become capable of logical thought. However, they may not necessarily demonstrate such thinking. Adolescents' understanding of how they and others think continues to change and develop. Younger children take what has been described as realistic approach to knowledge. They believe that knowledge is a property of the real world and that there are definite facts or truths that can be acquired. Older children or preadolescents become aware of the fact that experts often disagree, this leads them to develop a realistic approach, which recognises that different people may interpret the same information in contrasting ways.

Preadolescents go a bit farther, adopting a defended realism approach, which recognises the difference between facts and opinions. Adolescents realise that there is no secure basis for knowledge or for making decisions. They adopt an approach that is described as dogmatism-skepticism, in which, they alternate between blind faith in some authority and doubting everything. Later, some adolescents realise that while there is no absolute truths, there are better or worse reasons for holding certain views, an approach known as post skeptical rationalism.

Cognitive development continues throughout adolescence and results, in more mature modes of thought.

2.3 PIAGET'S THEORETICAL APPROACH ON COGNITIVE DEVELOPMENT

Swiss psychologist Jean Piaget (1896-1980), was the most well known and influential theorist for cognitive development. Piaget was interested in how children reacted to their environments. He proposed a more active role for them as suggested by learning theory. He envisioned a child's knowledge as composed of schemas, basic unit of knowledge used to organise past experiences and serve as a basis for understanding new ones.

Piaget's theory of cognitive development is a comprehensive theory about the nature and development of human intelligence first developed by Jean Piaget. It is primarily known as a developmental stage theory, but in fact, it deals with the nature of knowledge itself and how humans come gradually to acquire it, construct it, and use it. Moreover, Piaget claims the idea that cognitive development is at the centre of human organism and language is contingent on cognitive development.

In the theory of cognitive development, Piaget discusses about the four distinct, universal stages, each characterised by increasingly sophisticated and abstract levels of thoughts. These stages always occur in the same order, and each builds on what has been learned in the previous stage.

The stages are:

- *Sensorimotor Stage (infancy)*: In this period, there are six sub-stages, intelligence is demonstrated through motor activity without the use of symbols. Knowledge of the world is limited, but developing, because it is based on physical interactions and experiences. Children acquire object permanence at about seven months of age (memory). Physical development (mobility) allows the child to begin developing new intellectual abilities. Some symbolic (language) abilities are developed at the end of this stage.
- *Pre-operational stage (toddlerhood and early childhood)*: In this period, there are two sub stages, intelligence is demonstrated through the use of symbols, language use matures, and memory and imagination are developed, but thinking is done in a non-logical, non-reversible manner. Egocentric thinking predominates.
- *Concrete operational stage (elementary and early adolescence)*: This stage is characterised by seven types of conservation (number, length, liquid, mass, weight, area, and volume), intelligence is demonstrated through logical and systematic manipulation of symbols related to concrete objects. Operational thinking develops (mental actions that are reversible). Egocentric thought diminishes.
- *Formal operational stage (adolescence and adulthood)*: In this stage, intelligence is demonstrated through the logical use of symbols related to abstract concepts. Early in the period there is a return to egocentric thought. Only 35 percent of high school graduates in industrialised countries obtain formal operations; many people do not think formally during adulthood.

Adolescents, ages 12 through 19, are and should be at the “formal operations” stage of Piaget's cognitive development theory. It is characterised by an increased independence for thinking through problems and situations. Adolescents should be able to understand pure abstractions, such as philosophy and higher math concepts. During this age, children are able to learn and apply general information needed to adapt to specific situations. They are able to learn specific information and skills necessary for an occupation. A major component of the passage through adolescence is a cognitive transition. During this stage adolescents think in ways that are more advanced, more efficient, and generally more complex as compared to children.

This ability can be seen in five ways:

- 1) During adolescence individuals become better able than children to think about what is possible, instead of limiting their thought to what is real. Whereas children's thinking is oriented to the here and now—that is, to things and events

Development During Adolescence

that they can observe directly—adolescents are able to consider what they observe against a backdrop of what is possible; they can think hypothetically.

- 2) During the passage into adolescence, individuals become better able to think about abstract ideas. For example, adolescents find it easier than children to comprehend the sorts of higher-order, abstract logic inherent in puns, proverbs, metaphors, and analogies. The adolescent's greater facility with abstract thinking also permits the application of advanced reasoning and logical processes to social and ideological matters. This is clearly seen in the adolescent's increased facility and interest in thinking about interpersonal relationships, politics, philosophy, religion, and morality.
- 3) Teenagers begin to think more often about the process of thinking itself, or metacognition. As a result, adolescents may display increased introspection and self-consciousness. Although improvements in metacognitive abilities provide important intellectual advantages, one potentially negative byproduct of these advances is the tendency for adolescents to develop a sort of egocentrism, or intense preoccupation with the self.
- 4) Thinking tends to become multidimensional, rather than limited to a single issue. Whereas children tend to think about things one aspect at a time, adolescents can see things through more complicated lenses. Adolescents describe themselves and others in more differentiated and complicated terms and find it easier to look at problems from multiple perspectives. Being able to understand that people's personalities are not one-sided or that social situations can have different interpretations depending on one's point of view permits the adolescent to have far more sophisticated and complicated relationships with other people.
- 5) Adolescents are more likely than children to see things as relative, rather than absolute. Children tend to see things in absolute terms—in black and white. Adolescents, in contrast, tend to see things as relative. They are more likely to question others' assertions and less likely to accept facts as absolute truths. This increase in relativism can be particularly exasperating to parents, who may feel that their adolescent children question everything just for the sake of argument. Difficulties often arise, for example, when adolescents begin seeing their parents' values as excessively relative.

Egocentrism in Adolescence

An important aspect of the psychosocial development contributing to the adolescent period is adolescent egocentrism. According to Elkind (1967), adolescent egocentrism includes a belief system carried by adolescents that makes them consider themselves as special and unique. This feeling is accompanied by the acquisition of many new psychological abilities.

Adolescent egocentrism is also characterised by an imaginary audience with an increased self consciousness. They consider that people around them especially peers observe their activities and may comment on them. They are extremely conscious of what others think of them, their appearance and everything related to themselves. This way they perceive themselves as seen by them contributing to the development of self confidence.

Self Assessment Questions

1) Answer the following in True (T) or False (F):

- Adolescence is the period from age 12-19 years. ()
- Early adolescence uses more complex thinking, focus and expands them futuristic and philosophical concern. ()
- Adolescence becomes capable of logical thoughts. ()
- Adolescence egocentrism is characterised by an increased self consciousness. ()
- Egocentric thinking predominates in concrete operational stage. ()

2) Fill in the blanks:

- The development of the ability to think and reason is known as _____.
- Individuals in _____ focus on less self centred concept.
- Piaget discusses _____ distinct stages about cognitive development.
- Early in the period of formal operational stage there is a return to _____.
- Aspects of psychosocial development (i.e, belief systems) contributing to adolescence period is _____.

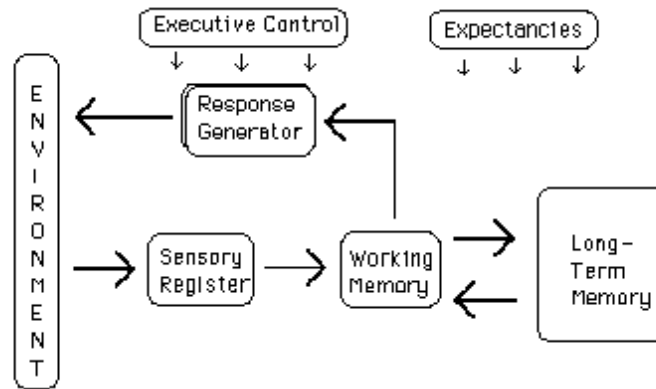
2.4 INFORMATION PROCESSING PERSPECTIVE

2.4.1 Information Processing

Information processing is the change (processing) of information in any manner detectable by an observer. As such, it is a process which *describes* everything which happens (changes) in the universe, from the falling of a rock (a change in position) to the printing of a text file from a digital computer system. In the latter case, an information processor is changing the form of presentation of that text file. Latent and manifest information is defined through the terms of equivocation (remaining uncertainty, what value the sender has actually chosen), dissipation (uncertainty of the sender what the receiver has actually received) and transformation (saved effort of questioning, that is equivocation minus dissipation).

When we deal with information, we do so in steps. One way to think of this is to picture the process of acquiring, retaining, and using information as an activity called information processing. Information comes from the outside world into the sensory registers into the human brain. This input consists of things perceived by our senses. We are not consciously aware of most of the things we perceive; we become aware of them only if we consciously direct our attention to them. When we do focus our attention on them, they are placed in our *working memory*.

Development During Adolescence



A Model of Human Information Processing

Another name for our working memory is *short-term memory*. Our working memory has a very limited capacity – we can attend to only about seven items at a time. Therefore, we must take one of the following actions with regard to each piece of information that comes into this short-term storage area: (1) continuously rehearse it, so that it stays there; (2) move it out of this area by shifting it to long-term memory; or (3) move it out of this area by forgetting it.

Long-term memory, as its name implies, stores information for a long time. The advantage of long-term memory is that we do not have to constantly rehearse information to keep it in storage there. In addition, there is no restrictive limit on the amount of information we can store in long-term memory. If we move information to long-term memory, it stays there for a long time - perhaps permanently! To make use of this information in long term memory, we must move it back to our working memory, using a process called *retrieval*.

Information processing can be viewed as parallel to the way in which an executive manages a business. Information comes into the business across the executive's desk - mail, phone calls, personal interactions, problems, etc. (This is like short-term memory.) Some of this information goes into the waste basket (like being forgotten), and some of it is filed (like being stored in long-term memory). In some cases, when new information arrives, the executive gets old information from a file and integrates the new information with the old before refiling it. (This is like retrieving information from long-term memory to integrate it with new information then storing the new information in long-term memory.) On other occasions the executive may dig out the information in several old files and update the files in some fashion or integrate them in some way to attack a complex problem. The business of human learning operates in much the same manner.

2.4.2 Information Processing Theory

The information-processing theory is associated with the development of high-speed computers in the 1950s. Researchers—most notably Herbert Simon and his colleagues—demonstrated that computers could be used to simulate human intelligence. This development led to the realisation that computer-oriented information-processing models could provide new insight into how the human mind receives, stores, retrieves, and uses information. The information-processing theory was one of several developments that ended the decades-long dominance of behaviourism in American psychology. It focused on innate mental capacities, rather than on conditioned,

externally observable behaviour. By enabling experimental psychologists to test theories about complex mental processes through computer simulation, information-processing models helped reestablish internal thought processes as a legitimate area of scientific inquiry.

The information processing theory is an approach to the cognitive development of a human being, which deals with the study and the analysis of the sequence of events that occur in a person's mind while receiving some new piece of information. In short, it is the analysis of the way a human being learns something new. There is a fixed pattern of events that take place in such a situation, and by knowing this pattern we can enable children and people with special abilities to learn new things faster.

The information processing theory laid down by experts in psychology claims that the human mind is very similar to that of computers, as far as information processing and analysis is concerned. They also say that any new piece of information that enters the brain is first analysed and then put through the test of several benchmarks before being stored in some vestibules of the memory. Since these actions occur at a very fast speed, we are unable to notice them in action.

The sensory perceptrors of a human being function in the same way as the hardware of a computer does, and the mindset and the rules and strategies adopted by the person while learning is equivalent to the software used by computers. The information processing system of a person can thus be enhanced if these perceptrors and rules are altered.

2.4.3 Information Processing Model

There is a fixed structure that the information processing theory follows, and it is divided into the following four parts.

- The store model : This is a breakdown of the model which states that the information that has been received can be stored in any of the processing units, or the channels through which it passes. These channels are the sensory register, short-term memory and long-term memory.
- The sensory register : This is that part of the mental processing unit that receives all information and then stores it temporarily or permanently.
- Short-term memory : That part of the sensory register where the information is stored temporarily. Once the decision has been made regarding the information, the information will either be discarded or transferred to the long-term memory.
- Long-term memory : The part where all the information is permanently stored. It can be retrieved later as and when the need arises.

The four main beliefs of the information-processing approach include the following:

- 1) When the individual perceives, encodes, represents, and stores information from the environment in his mind or retrieves that information, he is thinking. Thinking also includes responding to any constraints or limitations on memory processes.
- 2) The proper focus of study is the role of change mechanism in development. Four critical mechanisms work together to bring about change in children's cognitive skills: encoding, strategy construction, automatization and generalisation. To solve problems effectively, children must encode critical information about a problem and then use this encoded information and relevant prior knowledge to construct a strategy to deal with the problem.

Development During Adolescence

- 3) Development is driven by self-modification. Like Piaget's theory of cognitive development, the information-processing approach holds that children play an active role in their own development. Through self-modification, the child uses knowledge and strategies she has acquired from earlier problem solution to modify her responses to a new situation or problem. In this way, she builds newer and more sophisticated responses from prior knowledge
- 4) Investigators must perform careful task analysis of the problem situations they present to children. According to this view, not only the child's own level of development but the nature of the task itself constraints child's performance. Thus a child may possess the basic ability necessary to perform a particular task when it is presented in a simple form, without unnecessary complexities. However, if extra or misleading information is added to the same task, the child may become confused and be unable to perform it.

2.5 SCHOOL PERFORMANCE AND COGNITIVE DEVELOPMENT

During adolescent years, there are many reasons for teens to under perform at school as is given below:

- i) A lack of motivation to do well
- ii) Problems at home or with peers
- iii) Poor work habits or study skills
- iv) Emotional and behaviour problems
- v) Learning disabilities (such as dyslexia)
- vi) Attention deficit hyperactivity disorder
- vii) Mental retardation or below average intelligence
- viii) Other medical problems, including anxiety and depression.

Adolescent's achievement motivation focuses on adolescents' beliefs, values, and goals. These beliefs, goals, and values changes during early and middle adolescence which lead to decline in their motivation during this period.

Specifically, early adolescents have lower perceptions of their competence for different school subjects than do their younger peers. Adolescent's valuing of different school subjects often declines as they move through school, with the declines especially marked across the transition to middle school. Their intrinsic motivation for learning often decreases as well.

The most important implication of this work for middle school counselors is that motivational problems can become more central during early adolescence. This can be a time period in which adolescence motivation declines in significant ways. Counselors can help identify children most at risk of becoming demotivated at school, and work with teachers to help foster these adolescents' motivation.

The early adolescent period is marked by many changes in biological and psychological characteristics and in relations with peers, teachers, and counselors. The transition to middle school can be difficult for early adolescents, especially those struggling with the changes in other areas of their lives.

Middle school counselors and teachers can ease this transition and help early adolescents negotiate successfully the many changes they experience. This can be accomplished by

- a) cooperation among counselors, teachers, and administrators;
- b) involvement of parents;
- c) programs and curricula to foster students' development in multiple domains (i.e., academic, social, career);
- d) responsive counseling to assist with personal issues;
- e) cultural awareness and sensitivity; and
- f) advocacy for and attention to the diverse needs of all students.

A focus on the particular developmental issues that early adolescents face should be an important part of all middle school counseling programs.

Self Assessment Questions

3) Answer the following in True (T) or False (F):

- Information processing is the change of information in any manner detectable by an observer. ()
- Information comes from inside ourselves into the sensory registers in the human brain. ()
- Long term memory stores information for long time. ()
- Sensory register is the mental processing unit that receives all information and stores it. ()
- Information processing theory focused on externally observable behaviour. ()

4) Fill in the blanks:

- When the things are present in our conscious mind, and when we do focus on them, they are placed in our _____.
- When we get information from long term memory and focus attention on them, this process is called _____.
- _____ is the analysis of the way human being learns something new.
- Mails, phone calls, etc. are _____ memory.
- Adolescents tend to under perform due to lack of _____.

2.6 LET US SUM UP

Adolescence can be prolonged, brief or virtually non existent, depending on the type of culture in which it occurs. In societies that are simple, for example, the transition from childhood to adulthood tends to occur rather rapidly, and is marked by traditionally prescribed passage rites.

Development During Adolescence

Cognitive development refers to the development of the ability to think and reason. It refers to how a person perceives, think, and gains understanding of his/her world through the interaction of genetic and learned factors. It takes a fast pace during adolescence.

The early adolescent period is one marked by many changes in biological and psychological characteristics and in relations with peers, teachers, and counselors. The transition to middle school can be difficult for early adolescents, especially those struggling with the changes in other areas of their lives. Middle school counselors and teachers can ease this transition and help early adolescents negotiate successfully the many changes they experience. Particular recommendations to accomplish this include (a) cooperation among counselors, teachers, and administrators; (b) involvement of parents; (c) programs and curricula to foster students' development in multiple domains (i.e., academic, social, career); (d) responsive counseling to assist with personal issues; (e) cultural awareness and sensitivity; and (f) advocacy for and attention to the diverse needs of all students. A focus on the particular developmental issues that early adolescents face should be an important part of all middle school counseling programs.

Adolescents, ages 12 through 19, are and should be at the “formal operations” stage of Piaget’s cognitive development theory. It is characterised by an increased independence for thinking through problems and situations. Adolescents should be able to understand pure abstractions, such as philosophy and higher math concepts. During this age, children are able to learn and apply general information needed to adapt to specific situations. They are able to learn specific information and skills necessary for an occupation.

Adolescence can be prolonged, brief, or virtually nonexistent, depending on the type of culture in which it occurs. In societies that are simple, for example, the transition from childhood to adulthood tends to occur rather rapidly.

Adolescents become capable of logical thought. However, they may not necessarily demonstrate such thinking. Adolescents theory of mind their understanding of how they and others think- continues to change and develop.

Piaget’s theory of cognitive development is a comprehensive theory about the nature and development of human intelligence first developed by Jean Piaget. It is primarily known as a developmental stage theory, but in fact, it deals with the nature of knowledge itself and how humans come gradually to acquire it, construct it, and use it. Moreover, Piaget claims the idea that cognitive development is at the centre of human organism and language is contingent on cognitive development.

In the theory of cognitive development, Piaget discusses about the four distinct, universal stages, each characterised by increasingly sophisticated and abstract levels of thoughts.

Adolescent egocentrism is also characterised by an imaginary audience with an increased self consciousness. They consider that their people around them especially peers observe their activities and may comment on them. They are extremely conscious of what others think of them, their appearance and everything related to themselves. This way they perceive themselves as seen by them contributing to the development of self confidence.

The information processing theory is an approach to the cognitive development of a human being, which deals with the study and the analysis of the sequence of events that occur in a persons mind while receiving some new piece of information. In short,

it is the analysis of the way a human being learns something new. There is a fixed pattern of events that take place in such a situation, and by knowing this pattern we can enable children and people with special abilities to learn new things faster.

2.7 UNIT END QUESTIONS

- 1) Define cognitive development in children
- 2) What are the unique features of cognitive development during adolescence?
- 3) Describe Piaget's approach to cognitive development during adolescent stage of development.
- 4) What is information processing approach to cognitive development during adolescence.
- 5) Relate cognitive development and defects thereof to school performance during adolescence.

2.8 SUGGESTED READINGS

Bruner, J. (1966). *Studies in Cognitive Growth : A Collaboration at the Center for Cognitive Studies*. New York: Wiley & Sons.

David Pruitt, M.D (2000). *Your Adolescent: Emotional, Behavioural, and Cognitive Development from Early Adolescence Through the Teen Years*, Imprint: Harper Paperbacks, NY

2.9 ANSWERS TO THE SELF ASSESSMENT QUESTIONS

- 1)
 - True
 - False
 - True
 - True
 - False
- 2)
 - Cognitive development
 - Late adolescence
 - Four
 - Egocentric thought
 - Adolescent egocentrism
- 3)
 - True
 - False
 - True
 - True
 - False

**Development During
Adolescence**

- 4)
- Working memory
 - Retrieval
 - Information processing theory
 - Short term
 - Motivation



UNIT 3 IDENTITY SELF CONCEPT, SELF ESTEEM, PEER GROUP RELATIONSHIP

Structure

- 3.0 Introduction
- 3.1 Objectives
- 3.2 Identity in Adolescence
- 3.3 Identity Crisis
 - 3.3.1 Marcia's Identity Statuses
- 3.4 Social Development
- 3.5 Self Concept and Self Esteem in Adolescence
 - 3.5.1 Signs of Negative Self Concepts in Adolescents
 - 3.5.2 Egocentrism in Adolescence
- 3.6 Let Us Sum Up
- 3.7 Unit End Questions
- 3.8 Suggested Readings

3.0 INTRODUCTION

Adolescence is known to be a period of exploratory self-analysis and self-evaluation ideally culminating in the establishment of a cohesive and integrative sense of self or identity. The search for identity, during the adolescent period, is very much affected by the social world: peers, parents, schools, and neighborhoods.

Identity formation involves the successful negotiation of a variety of activities and relationships during adolescence, including school achievement, social relations with others, and development of career interests and choices, along with a great deal of exploration of different activities and roles. One's gender, ethnicity, and sexual orientation all are important to adolescents' developing identity. Integrating these experiences and characteristics into a coherent sense of self is fundamental to identity formation, and researchers have proposed different phases of the identity development process. Adolescents' focus on identity as their understanding of that childhood is ending and the adult phase of their life is about to begin.

Identity development involves two steps. First, the adolescent must break away from childhood beliefs to explore alternatives for identity in a particular area. Second, the adolescent makes a commitment as to their individual identity in that area. Some aspects of identity, especially among young adolescents, may be foreclosed. The foreclosure status is when a commitment is made without exploring alternatives.

Identity achievement during adolescence serves as a basis for our adult expectations and goals for us. As individuals enter early adulthood they use their current understanding of whom they are to develop a lifespan construct which serves as the link between the identity developed in adolescence and the adult self. The lifespan construct is an integration of an individual's past, present, and culture.

Development During Adolescence

An identity crisis is a term in an epigenetic and social psychological theory in which an individual loses a sense of personal sameness and historical continuity. The term was coined by the psychologist Erik Erikson. According to Erikson, an identity crisis is a time of intensive analysis and exploration of different ways of looking at oneself.

According to Erikson, an identity crisis is a time of intensive analysis and exploration of different ways of looking at oneself. Erikson's interest in identity began in childhood. Erikson described identity as "a subjective sense as well as an observable quality of personal sameness and continuity, paired with some belief in the sameness and continuity of some shared world image.

In Marcia's model, identity involves the adoption of 1) a sexual orientation, 2) a set of values and ideals and 3) a vocational direction. A well-developed identity gives on a sense of one's strengths, weaknesses, and individual uniqueness.

The self-concept is the accumulation of knowledge about the self, such as beliefs regarding personality traits, physical characteristics, abilities, values, goals, and roles. In adolescence, the self-concept becomes more abstract, complex, and hierarchically organised into cognitive mental representations or self-schemas, which direct the processing of self-relevant information.

Self-concept or self-identity is the sum total of a being's knowledge and understanding of his or her self. The self-concept is different from self consciousness, which is an awareness of one's self. Components of the self-concept include physical, psychological, and social attributes, which can be influenced by the individual's attitudes, habits, beliefs and ideas. These components and attributes can not be condensed to the general concepts of self-image and the self-esteem.

Self-concept refers to self-evaluation or self perception, and it represents the sum of an individual's beliefs about his or her own attributes. Self concept reflects how an adolescent evaluates himself or herself in *domains* (or areas) in which he or she considers success important. An adolescent can have a positive self-concept in some domains and a negative self-concept in others.

Adolescent egocentrism is also characterised by an imaginary audience with an increased self consciousness. They consider that their people around them especially peers observe their activities and may comment on them. They are extremely conscious of what others think of them, their appearance and everything related to themselves. This way they perceive themselves as seen by them contributing to the development of self confidence.

3.1 OBJECTIVES

After going through this unit, you will be able to:

- define and describe identity and identity crisis in adolescents;
- explain Marcia's identity crisis;
- analyse social development and egocentrism in adolescents; and
- explain self-concept and self-esteem during adolescence.

3.2 IDENTITY IN ADOLESCENCE

Adolescence is known to be a period of exploratory self-analysis and self-evaluation ideally culminating in the establishment of a cohesive and integrative sense of self or

identity. This process involves the exploration and testing of alternative ideas, beliefs, and behaviours, marking this period as one of both dramatic change and uncertainty. Erikson provided perhaps the most widely recognised theoretical framework for conceptualising the transformation of the self during adolescence. This framework provides for the development of a sense of one's individuality (self-sameness) and continuity with significant others.

Identity is a new way of thinking about oneself that emerges during adolescence. Identity involves a sense of self-unity, accompanied by a feeling that the self has continuity over time. A firmly established identity also provides a sense of uniqueness as a person. According to Erikson's psychosocial model of development, identity must be perceived by the individual, but also recognised and confirmed by others. Thus, the process of establishing an identity involves "Integrating into a coherent whole one's past experiences, ongoing personal changes, and society's demands and expectations for one's future"

The process of developing an identity begins with the infant's discovery of self, continues throughout childhood, and becomes the focus of adolescence. Erik Erikson, identified the goal of adolescence as achieving a coherent identity and avoiding identity confusion. Identity is multidimensional and may include physical and sexual identity, occupational goals, religious beliefs, and ethnic background. Adolescents explore these dimensions, and usually make commitments to aspects of their identity as they move into early adulthood.

Identity development begins with children's awareness that they are separate and unique individuals. First indications of this awareness are evident in infancy when children begin to recognise themselves. They recognise the reflected image as themselves. Also, the words "me," "I," and "mine" emerge very early in children's language. These findings are consistent with Erikson's psychosocial stage of autonomy versus shame and doubt, when infants establish their identity as independent persons.

During childhood, self-awareness grows and changes. Preschoolers describe themselves in terms of observable characteristics and behaviours, including physical attributes ("I have brown eyes"), preferences ("I like to ride my bike"), and competencies ("I can sing 'Itsy, Bitsy Spider'"). Between ages six and twelve, children begin to include less concrete aspects of the self in their descriptions. School-aged children talk about their feelings ("I love my dog") and how they fit into their social world ("I'm the best fielder on my team"). During Erikson's stage of initiative versus guilt children explore their skills, abilities, and attitudes and incorporate the information into their view of self.

As children edge closer and closer to adulthood, it seems they reach a point where they want to be defined by anything BUT their parents. They stop wanting to spend time with family, and may even detest being seen with their parents. "Please drop me off a block from school, Mom. I want to walk the rest of the way." These words are painful to a mother who has devoted many years of her life to meeting all of her teenage son's needs. Suddenly, he's embarrassed to be seen in the same car with her.

The process of separation from parents is a natural one. Erik Erikson was the first major psychological theorist to develop the notion of an adolescent "identity crisis." In his view, all of the earlier crystallisations of identity formed during childhood come into question during adolescence with the overwhelming combination of physical changes, increased sex drive, expanded mental abilities, and increasing and conflicting social demands. To develop a sense of identity amidst the confusion, Erikson stated

Development During Adolescence

in Identity: Youth and Crisis that adolescents need to try on a variety of roles and “must often test extremes before settling on a considered course.”

At this stage, adolescents often reject their parents, and all that they stand for so that they can make a clean break from childhood as they attempt to form an identity of their own. They are hungry for role models and can be rather indiscriminate about where they find them. With their sense of identity in flux, teens will often turn to peer groups for that missing sense of belonging. This explains some of the cult-like tendencies amongst early adolescents to worship the same heroes (movie stars, singers), wear the same clothes and “rebel” against traditional authority. The interesting thing about this so-called rebellion is that it’s often actually another form of conformity — Gina wants a tattoo or a navel ring because everyone else is getting them. Everyone has platform shoes so she’ll feel like an outcast if she’s not wearing them.

At this stage of development (usually early teens), role models can make a critical difference in choices adolescents make, choices that could affect the course of their lives. At this age, teens have a strong need to idealize others, especially those who are older and more worldly, qualities they desperately want to possess. They can be as easily awed by an older (that is, 18- or 19 year-old) guy who drives a fancy car and pushes drugs, as by a sports hero who espouses clean living, hard work and dedication.

The physical, cognitive, and social changes of adolescence allow the teenager to develop the identity that will serve as a basis for their adult lives. During Erikson’s stage of identity versus role confusion, adolescents’ description of self expands to include personality traits (“I’m outgoing”) and attitudes (“I don’t like stuck-up people”). The emergence of abstract reasoning abilities allows adolescents to think about the future and experiment with different identities.

Identity development involves two steps. First, the adolescent must break away from childhood beliefs to explore alternatives for identity in a particular area. Second, the adolescent makes a commitment as to their individual identity in that area. Some aspects of identity, especially among young adolescents, may be foreclosed. The foreclosure status is when a commitment is made without exploring alternatives.

Identity achievement during adolescence serves as a basis for our adult expectations and goals for us. As individuals enter early adulthood they use their current understanding of whom they are to develop a lifespan construct which serves as the link between the identity developed in adolescence and the adult self. The lifespan construct is an integration of an individual’s past, present, and culture.

3.3 IDENTITY CRISIS

Are you unsure of your role in life? Do you feel like you don’t know the ‘real you’? If you answer yes to the previous questions, you may be experiencing an identity crisis. Theorist Erik Erikson coined the term *identity crisis* and believed that it was one of the most important conflicts people face in development.

An identity crisis is a term in an epigenetic and social psychological theory in which an individual loses a sense of personal sameness and historical continuity. The term was coined by the psychologist Erik Erikson. According to Erikson, an identity crisis is a time of intensive analysis and exploration of different ways of looking at oneself.

According to Erikson, an identity crisis is a time of intensive analysis and exploration of different ways of looking at oneself. Erikson’s interest in identity began in childhood.

Erikson described identity as “a subjective sense as well as an observable quality of personal sameness and continuity, paired with some belief in the sameness and continuity of some shared world image. As a quality of unself-conscious living, this can be gloriously obvious in a young person who has found himself as he has found his communality. In him we see emerge a unique unification of what is irreversibly given—that is, body type and temperament, giftedness and vulnerability, infantile models and acquired ideals—with the open choices provided in available roles, occupational possibilities, values offered, mentors met, friendships made, and first sexual encounters.”

In Erik Erikson’s stages of psychosocial development, the emergence of an identity crisis occurs during the teenage years in which people struggle between feelings of identity versus role confusion. Researcher James Marcia (1966, 1976, 1980) has expanded upon Erikson’s initial theory.

James Marcia argued that identity could be viewed as a structure of beliefs, abilities and past experiences regarding the self. “The better developed this structure is, the more individuals appear to be of their own strengths and weaknesses. The less developed this structure is, the more confused individuals seem to be about their own distinctiveness from others and the more they have to rely on external sources to evaluate themselves.” Identity is a dynamic, not static psychological structure. The formation of identity in adolescence sets the stage for continual changes in the content of identity through the adult years.

3.3.1 Marcia’s Identity Statuses

James Marcia refined and extended Erikson’s work on identity. In Marcia’s model, identity involves the adoption of 1) a sexual orientation, 2) a set of values and ideals and 3) a vocational direction. A well-developed identity gives on a sense of one’s strengths, weaknesses, and individual uniqueness. A person with a less well-developed identity is not able to define his or her personal strengths and weaknesses, and does not have a well articulated sense of self.

Marcia (1966) operationalised the stage progression theory of identity development proposed by Erikson by identifying four identity statuses: diffusion, foreclosure, moratorium, and achievement. Through the use of a semistructured interview, an individual could be assigned an identity status on the basis of the evidence of crisis and commitment in the domains of occupation, religion, and politics. Since its inception, Marcia’s interview has stimulated a wide range of research in the area of identity formation.

To better understand the identity formation process, Marcia conducted interviews with young people. He asked whether the participants in his study (1) had established a commitment to an occupation and ideology and (2) had experienced, or were presently experiencing, a decision making period (adolescent identity crisis). Marcia developed a framework for thinking about identity in terms of four identity statuses. It is important to note that these are NOT stages. Identity statuses should not be viewed as sub stages in a sequential or linear process.

i) *Foreclosure*: These people have made commitments to an occupational future, but have not experienced an identity crisis. They have conformed to the expectations of others concerning their future. For example, an individual may have allowed a parent to decide what career they will pursue. These individuals have not explored a range of options (experience an “identity crisis”).

Development During Adolescence

- ii) *Diffusion*: The young person has not made a commitment, and may or may not have experienced an identity crisis. He or she appears to have given up any attempt to make the commitments needed for developing a clear sense of identity as Marcia defines the term.
- iii) *Moratorium*: Individuals in moratorium are actively exploring alternative commitments, but have not yet made a decision. They are experiencing an identity crisis, but appear to be moving forward toward identity formation, making commitments.
- iv) *Achievement*: The individual has experienced an identity crisis and has made commitments necessary for building a sense of identity as described above.

The core idea is that one's sense of identity is determined largely by the choices and commitments made regarding certain personal and social traits. The work done in this paradigm considers how much one has made certain choices, and how much he or she displays a commitment to those choices. Identity involves the adoption of 1) a sexual orientation, 2) a set of values and ideals and 3) a vocational direction. A well-developed identity gives one a sense of one's strengths, weaknesses, and individual uniqueness. A person with a less well-developed identity is not able to define his or her personal strengths and weaknesses, and does not have a well articulated sense of self.

Self Assessment Questions

1) Discuss the following in one or two sentences:

- Identity

.....

.....

- Identity crisis

.....

.....

- Identity statuses

.....

.....

- Role confusion

.....

.....

3.4 SOCIAL DEVELOPMENT

Adolescence is a time when parental influences decrease and peer influences increase. Adolescence is a time when the individual searches for her own identity. These happens by the youngsters interactions with her peers and many outsiders including her teachers, neighborhood adults and others. Same sex hero worship is quite common during this period. Also they are highly swayed and impressed by the idealism of hero's and social workers. At this age they enjoy doing work for others, and love

to serve the community. They take up examples of great pioneers and try to mould themselves like them. They may also like to imitate film heroes and try to do things like them. All these efforts contribute in a big way to the youngsters self identity.

Adolescence begins with the physical changes that lead to sexual maturity however studies in the recent years have shown that puberty is occurring at an earlier age so also the physical development.

Adolescents experience many moods and are more prone to mood swings (Myers, 2004). The cognitive development that takes place during this time gives adolescents the ability to reason. These advancing reasoning skills allow adolescents to ponder several options and possibilities to many social situations and experiences. They are able to think more logically than when they were younger. They are also able to think hypothetically, even abstractly.

3.5 SELF CONCEPT AND SELF ESTEEM IN ADOLESCENCE

The self-concept is the accumulation of knowledge about the self, such as beliefs regarding personality traits, physical characteristics, abilities, values, goals, and roles. In adolescence, the self-concept becomes more abstract, complex, and hierarchically organised into cognitive mental representations or self-schemas, which direct the processing of self-relevant information.

Self-concept-the way in which one perceives oneself-can be divided into categories, such as personal self-concept (facts or one's own opinions about oneself, such as "I have brown eyes" or "I am attractive"); social self-concept (one's perceptions about how one is regarded by others: "people think I have a great sense of humor"); and self-ideals (what or how one would like to be: "I want to be a lawyer" or "I wish I were thinner").

Self-concept or self-identity is the sum total of a being's knowledge and understanding of his or her self. The self-concept is different from self consciousness, which is an awareness of one's self. Components of the self-concept include physical, psychological, and social attributes, which can be influenced by the individual's attitudes, habits, beliefs and ideas. These components and attributes can not be condensed to the general concepts of self-image and the self-esteem.

Self-concept refers to self-evaluation or self perception, and it represents the sum of an individual's beliefs about his or her own attributes. Self concept reflects how an adolescent evaluates himself or herself in *domains* (or areas) in which he or she considers success important. An adolescent can have a positive self-concept in some domains and a negative self-concept in others.

Teachers, administrators, and parents commonly voice concerns about students' self-esteem. Its significance is often exaggerated to the extent that low self esteem is viewed as the cause of all evil and high self-esteem as the cause of all good. Promoting high self-concept is important because it relates to academic and life success. Although the terms *self-concept* and *self-esteem* are often used interchangeably, they represent different but related constructs. *Self-concept* refers to a student's perceptions of competence or adequacy in academic and nonacademic (example, social, behavioural, and athletic) domains and is best represented by a profile of self-perceptions across domains. *Self-esteem* is a student's overall evaluation of him- or herself, including feelings of general happiness and satisfaction.

Development During Adolescence

Self-concept and academic achievement: Self-concept is frequently positively correlated with academic performance, but it appears to be a consequence rather than a cause of high achievement. This is a common assumption that an individual's high academic performance results in their self concept. Whereas, the high academic performance is the result of individual's self concept.

Self-concept and aggression: Another popular assumption is that aggressive students have low self-concept and use aggression as a means of raising it.

Self-concept, depression, and use of illegal substances: Low self-concept is often considered a defining characteristic of depression, but the evidence for this is weak. Similarly, although some evidence suggests that low self-concept may be a weak risk factor for smoking in girls, the relationship between self-concept and the use of alcohol and illegal drugs has little support.

An adolescent's self-concept is dynamic, and causality is complex. That is, problems and difficulties can lower self-concept; but low self-concept can also cause problems. For adolescents, having a high academic self-concept is associated with positive academic performance and having a high physical self-concept is related to increased physical activity, for example.

3.5.1 Signs of Negative Self Concept in Adolescents

Several signs may indicate that an adolescent has a negative self-concept. These may include one or more of the following:

- Doing poorly in school;
- Having few friends;
- Putting down one self and others;
- Rejecting compliments;
- Teasing others;
- Showing excessive amounts of anger;
- Being excessively jealous;
- Appearing conceited; or
- Hesitating to try new things.

Strategies that can be used to improve an adolescent's self-concept include providing praise for accomplishments, praising effort, working with the individual to encourage improvement in areas where he or she feels deficient, and refraining from using negative feedback.

Self esteem is the one important factor required by anybody to succeed in life. It is a well proven concept that if you can build self esteem at your adolescent period it will last all through your life. Adolescence is one period in which boys and girls faces with many problems and issues. It is necessary that adolescent self esteem to be at top to face the problems faced with adolescent period. Many teenagers will have low self esteem and it is imperative to know major reasons for low self esteem and find out ways and means to combat the low self esteem. It is highly advisable to make dedicated efforts to bring up the self esteem.

There are many causes for the lack of self esteem. Let us review some of them.

- *Hereditary* is a main factor for low self esteem. If the parents are introverts and they never mingle with people for fear of their inability, the chances that children have low esteem are more.
- *The living conditions:* The surrounding in which you live also affects the lack of self esteem. If the child is brought up in a poor environment without giving proper attention to make him excel in his fields or deprived of doing good activities, the low self esteem at the adolescent stage is possible.
- *Lack of proper education:* is another factor affecting the self esteem. Uneducated children will develop lack of self esteem as they will face problems in interacting with the educated of their age.
- *Physiological:* Adolescence is a period when major physical changes occur in boys and girls. The gender hormones start the functioning in full swing during this period. Many children face problems during this change unable to cope with the changes occurring in their body and behaviour.
- *Societal implications:* During the adolescent stage of a child, society put many restrictions in their behaviours and attitudes. Girls will be automatically tempted to move away from the boys and boys are restricted to mingle with girls during the period. This makes them feel that there are some things to be afraid. This will automatically make them fear in a natural interaction.
- *Fear about future:* During the late periods of adolescence, the children will seriously think about their future and in many cases they will get depressed of their future. Unemployment, dating problems, insecurity, lack of financial backgrounds and many such factors make the adolescents afraid of facing the world.
- *Diseases and other physical ailments:* These children will be thinking that they are debris in the world. These thinking processes make them to keep away from others and they can become agitated.

There are many such reasons for low self esteem of adolescents. If proper care is not given, the low self esteem gradually will lead to many physical and mental ailments. It is important to bring up the adolescents with high self esteem.

3.5.2 Egocentrism in Adolescence

An important aspect of the psychological development contributing to the adolescent period is adolescent egocentrism. According to Elkind (1967), adolescent egocentrism includes a belief system carried by adolescents that makes them consider themselves as special and unique. This feeling is accompanied by the acquisition of many new psychological abilities.

Adolescent egocentrism is also characterised by an imaginary audience with an increased self consciousness. They consider that their people around them especially peers observe their activities and may comment on them. They are extremely conscious of what others think of them, their appearance and everything related to them selves. This way they perceive themselves as seen by them contributing to the development of self confidence.

Self Assessment Questions

1) Discuss the following in one or two sentences:

- Self concept

.....

- Self esteem

.....

- Adolescent egocentrism

.....

- Negative self-concept

.....

3.6 LET US SUM UP

Adolescence is known to be a period of exploratory self-analysis and self-evaluation ideally culminating in the establishment of a cohesive and integrative sense of self or identity. The search for identity, during the adolescent period, is very much affected by the social world: peers, parents, schools, and neighborhoods.

This process involves the exploration and testing of alternative ideas, beliefs, and behaviours, marking this period as one of both dramatic change and uncertainty. Erikson provided perhaps the most widely recognised theoretical framework for conceptualising the transformation of the self during adolescence.

As children edge closer and closer to adulthood, it seems they reach a point where they want to be defined by anything BUT their parents. They stop wanting to spend time with family, and may even detest being seen with their parents. "Please drop me off a block from school, Mom. I want to walk the rest of the way." These words are painful to a mother who has devoted many years of her life to meeting all of her teenage son's needs. Suddenly, he's embarrassed to be seen in the same car with her.

The process of separation from parents is a natural one. Erik Erikson was the first major psychological theorist to develop the notion of an adolescent "identity crisis." In his view, all of the earlier crystallisations of identity formed during childhood come into question during adolescence with the overwhelming combination of physical changes, increased sex drive, expanded mental abilities, and increasing and conflicting social demands. To develop a sense of identity amidst the confusion, Erikson stated in *Identity: Youth and Crisis* that adolescents need to try on a variety of roles and "must often test extremes before settling on a considered course."

According to Erikson, an identity crisis is a time of intensive analysis and exploration of different ways of looking at oneself. Erikson's interest in identity began in childhood. Erikson described identity as "a subjective sense as well as an observable quality of personal sameness and continuity, paired with some belief in the sameness and continuity of some shared world image. As a quality of unself-conscious living, this

can be gloriously obvious in a young person who has found himself as he has found his communality. In him we see emerge a unique unification of what is irreversibly given—that is, body type and temperament, giftedness and vulnerability, infantile models and acquired ideals—with the open choices provided in available roles, occupational possibilities, values offered, mentors met, friendships made, and first sexual encounters.”

Marcia (1966) operationalised the stage progression theory of identity development proposed by Erikson by identifying four identity statuses: diffusion, foreclosure, moratorium, and achievement. Through the use of a semistructured interview, an individual could be assigned an identity status on the basis of the evidence of crisis and commitment in the domains of occupation, religion, and politics. Since its inception, Marcia’s interview has stimulated a wide range of research in the area of identity formation.

The self-concept is the accumulation of knowledge about the self, such as beliefs regarding personality traits, physical characteristics, abilities, values, goals, and roles. In adolescence, the self-concept becomes more abstract, complex, and hierarchically organised into cognitive mental representations or self-schemas, which direct the processing of self-relevant information.

Self-concept refers to self-evaluation or self perception, and it represents the sum of an individual’s beliefs about his or her own attributes. Self concept reflects how an adolescent evaluates himself or herself in *domains* (or areas) in which he or she considers success important. An adolescent can have a positive self-concept in some domains and a negative self-concept in others.

Self esteem is the one important factor required by anybody to succeed in life. It is a well proven concept that if you can build self esteem at your adolescent period it will last all through your life. Adolescence is one period in which boys and girls faces with many problems and issues. It is necessary that adolescent self esteem to be at top to face the problems faced with adolescent period. Many teenagers will have low self esteem and it is imperative to know major reasons for low self esteem and find out ways and means to combat the low self esteem. It is highly advisable to make dedicated efforts to bring up the self esteem.

3.7 UNIT END QUESTIONS

- 1) Define identity, self concept and self esteem.
- 2) In what ways the peer group relationship contributes to development of self esteem, self concept and identity?
- 3) What is Marcia’s concept of self?
- 4) What is social identity?
- 5) How is identity crisis resolved?

3.8 SUGGESTED READINGS

David Pruitt, M.D (2000). *Your Adolescent: Emotional, Behavioural, and Cognitive Development from Early Adolescence Through the Teen Years*, Imprint: Harper Paperbacks, NY

Burns, R. B. (1979). “The self-concept in theory, measurement, development and behaviour.” London:

UNIT 4 CHALLENGES AND ISSUES IN ADOLESCENT DEVELOPMENT

Structure

- 4.0 Introduction
- 4.1 Objectives
- 4.2 Challenges of Adolescence
 - 4.2.1 Coping with the Loss of Normalcy
 - 4.2.2 Acknowledging Sexuality
 - 4.2.3 Change in Point of View
 - 4.2.4 High Risk Behaviours
- 4.3 Let Us Sum Up
- 4.4 Unit End Questions
- 4.5 Suggested Readings
- 4.6 Answers to the Self Assessment Questions

4.0 INTRODUCTION

Adolescence can be described as a phase of life beginning in biology and ending in society. Adolescence may be defined as the period within the life span when most of a person's biological, cognitive, psychological, and social characteristics are changing from what is typically considered childlike to what is considered adult-like. For the adolescent, this period is a dramatic challenge, one requiring adjustment to changes in the self, in the family, and in the peer group. In contemporary society, adolescents experience institutional changes as well. Among young adolescents, there is a change in school setting, typically involving a transition from elementary school to either junior high school or middle school; and in late adolescence, there is a transition from high school to the worlds of work, university, or childrearing.

Understandably, then, for both adolescents and their parents, adolescence is a time of excitement and of anxiety; of happiness and of troubles; of discovery and of bewilderment; and of breaks with the past and of links with the future. Adolescence can be a confusing time—for the adolescent experiencing this phase of life, for the parents who are nurturing the adolescent during his or her progression through this period, and for other adults charged with enhancing the development of youth during this period.

The hopes, challenges, fears, and successes of adolescence have been romanticised or dramatised in novels, short stories, and news articles. It is commonplace to survey a newsstand and to find a magazine article describing the “stormy years” of adolescence, the new crazes or fads of youth, or the “explosion” of problems with teenagers (e.g. crime or sexuality).

Until the past 20-25 years, when medical, biological, and social scientists began to study intensively the adolescent period, there was relatively little sound scientific information available to verify or refute the literary characterisations of adolescence. Today, however, such information does exist, and it is clear that although adolescence presents many challenges, the evidence is not consistent with the frequently reported belief that adolescence is a protracted period of storm and stress for most individuals.

Adolescents yearn to develop a unique and independent identity, *separate* from their parents. Yes, they love their parents, but they do not simply want to follow in their foot steps. They challenge their parents in any way they can. They disobey their rules; criticize their “old fashioned” values; they discard their suggestions.

Experienced parents know that sometimes they have to be very “political” approaching their adolescent children, if they are going to get their point across. On the other hand, adolescents give a lot of credit to their peers. They yearn to belong to a peer group which would define and support their identity. They may attempt to do things very much out of character just to gain the approval and acceptance of their peers. They tend to hide their weaknesses and exaggerate their strengths. Of course, what adolescents consider as “weakness” or “strength” may sometimes shock their parents.

4.1 OBJECTIVES

After going through this unit, you will be able to:

- define and describe the challenges and various issues faced by an adolescent;
- explain how to cope with the loss of normalcy;
- analyse the causes underlying the acknowledging of sexuality and high risk behaviours; and
- explain the reasons for the change in their point of view.

4.2 CHALLENGES OF ADOLESCENCE

Adolescence may be defined as the period within the life span when most of a person’s biological, cognitive, psychological, and social characteristics are changing from what is typically considered childlike to what is considered adult-like. For the adolescent, this period is a dramatic challenge, one requiring adjustment to changes in the self, in the family, and in the peer group. In contemporary society, adolescents experience institutional changes as well. Among young adolescents, there is a change in school setting, typically involving a transition from elementary school to either junior high school or middle school; and in late adolescence, there is a transition from high school to the worlds of work, university, or childrearing.

Adolescence is a period that is full of challenges. This is a time when a teenager undergoes a lot of changes, physically, chemically and emotionally. The adolescent’s life changes dramatically wherein he or she starts having increased hormone levels, the thought process changes, and so also the social life. The teenager has to deal with all these changes at the same time, and this can be extremely challenging.

During adolescence, parents should play a highly supportive role. They have all the necessary experience, resources and maturity to make this transition as easy as possible. Parents have to first of all understand the convoluted and conflicting requirements of a teenager.

During adolescence, a teenager is trying to carve out his or her own identity that is completely separate from their parents. No doubt teenagers love their parents, but they do not want to follow in the foot steps of the parents. They try to challenge their parents’ authority in every possible way and also pay no heed to suggestions given by their parents. Instead adolescents prefer to spend more time with their peers and give all the credit to them. They yearn to be accepted by their peers and go out of their way to gain this acceptance. They end up highlighting their strengths and playing down their weaknesses.

Development During Adolescence

Another challenge during adolescence is shunning social interaction with parents and other adults. They prefer to be with their peers. However, this same preference can also lead to anxiety and depression among some adolescents.

There are multiple pathways through adolescence. Interindividual (between-person) differences and intra-individual (within-person) changes in development are the “rule” in this period of life. Normal adolescent development involves such variability. Temperamental characteristics involving mood and activity level are good example. There are differences among adolescents in such characteristics, which may influence adolescent behaviours such as substance use and delinquency. There is also diversity between and within all ethnic, racial, or cultural minority groups. Therefore, generalisations that: confound class, race, and/or ethnicity are not useful.

Adolescence is full of challenges for any individual. The change is fast, everywhere, and hard to keep up with: The body changes in response to increasing levels of sex hormones; the thinking process changes as the child is able to think more broadly and in an abstract way; the social life changes as new people and peers come into scope. Yet the child needs to deal with every single one of these changes, all at the same time! With their willingness to help, that’s where the parents come in, who have “been there”, with the life experience, maturity and resources. So, how can parents help? Recognising the complex and sometimes conflicting needs of an adolescent would be a good point to start. Adolescents yearn to belong to a peer group which would define and support their identity. They may attempt to do things very much out of character just to gain the approval and acceptance of their peers. They tend to hide their weaknesses and exaggerate their strengths. Of course, what adolescents consider as “weakness” or “strength” may sometimes shock their parents.

Youngsters with autism bring their special flavor to the adolescence, essentially determined by the levels of three ingredients: interest, avoidance and insight.

Level of interest: Since all forms of autism has an impact on social development by definition, most adolescents with moderate to severe autism will show little or no interest in others. They may seem to be totally unaware of their peers’ presence or they may appear indifferent when peers try to interact. As autism gets less severe, the level of interest in peers usually increases. For these youngsters, the quality of social interactions mostly depends on the levels of avoidance and insight.

Level of avoidance: In the social development of adolescents who show some interest in peer interactions, social anxiety and resultant avoidance play an important role. Some youngsters get very nervous just with the thought of approaching others and may choose to avoid it at all costs. Their avoidance may appear as if they are not interested in others. It is important to differentiate this since anxiety can be treated much more easily than genuine lack of interest.

For adolescents with autism who show interest in peers and do not avoid contact, the quality of social interactions will depend on the level of insight.

Level of insight: Yet some adolescents with autism will not avoid interacting with others; younger, older or similar age. Rather, they are eager to communicate, though, often in a clumsy, in-your-face way. The level of their insight into their social disability will then become the determining factor of their social success. If they are unaware of their shortcomings in gauging the social atmosphere and reading social cues, they may inadvertently come across as rude, insulting or boring.

They may miss subtle criticism, sarcasm or tease. As they develop better insight, they

become more motivated to *learn* which had not come naturally and intuitively. They also have a better chance to work through a sense of loss, common to all disabilities.

4.2.1 Coping with the Loss of Normalcy

Regardless of the individual developmental route, most children with autism start realising that they are not quite like others at some point during their adolescence. A few factors seem to facilitate the process:

A higher level of interest in others

A higher level insight into difficulties in social interaction

A higher IQ

Once the adolescent realises that he has significant difficulties in conducting social relationships compared to his peers, he needs deal with this loss, just like dealing with another loss. Understanding the thoughts, feelings and behaviour of an adolescent with autism is the necessary first step in helping him out and being there for him. Considering this coping process in a few stages may make the caregivers' job easier:

Anger

Denial

Depression

Acceptance

Adaptation

Most commonly, the adolescent will not go through these stages one after another, but rather display a larger or smaller aspect of each at any given time. This is a painful process for not only the adolescent but for others who care for him as well. Parents may find themselves compelled to forget the whole thing and act as if nothing is happening. Denial is one form of getting over the problem. It is important for the parents to help the youngster not to deny but to face the problem and handle it squarely. If parents handle the problems calmly and in a matter of fact manner, this will encourage the adolescent to also follow similar approach. Help the youngster to talk about his anger and frustration, which will in turn help the adolescent get closer to the acceptance and adaptation. Parents do not have to bring up any topic or take initiative and give an impression of intrusion; instead if they give a good listening and show patience to the youngster when he or she brings about a problem, will go a long way in easing the situation.

When the youngster is making statement about the problem, stay on the problem without changing the topic unless the youngster changes the topic. This would give confidence and trust to the youngster in regard to the parents that they would listen to him and he can trust them to be patient with his anxiety and concerns. This adds to the youngster's self esteem also.

It is important for the parents to be in line with the youngster, listen to the difficulties and not to trivialise or minimise the problem, but understand the problem entirely from the point of view of the youngster. At the same time parents should also not allow the youngster to exaggerate an issue. They should provide the youngster cues for reality testing in a gentle way.

Where the parents find the youngster not coming forth frankly with the problem or finds the youngster hesitating a great deal, every effort should be made to offer the

Development During Adolescence

option of counseling, since sometimes it is easier to talk to a stranger. However, the parents should never push the idea directly even if they feel that their child clearly needs professional help.

If parents find the youngster depressed, they could consult a psychiatrist and get the needed medication to overcome the depression. It is important for the parents to look for the following common symptoms of clinical depression. If five or more of these are present week after week, then it is indicative of definite depression and the youngster needs immediate help. The symptoms to look for are given below:

- Appearing sad for most of the time;
- Becoming irritable and angry in regard to flimsy issues, so that family members avoid the youngster lest the latter becomes very angry or upset.
- Not being able to fall asleep, waking up in the middle of the night and having difficulty falling back to sleep;
- Complaining that he is tired all the time and wanting to take naps during the day;
- Eating less or more than usual;
- Putting himself down, saying he is stupid;
- Making remarks like they hate life, they hate the counselor, parents etc.
- You, nobody loves him, or wishing he was dead;
- Losing interest in activities he usually enjoys;
- Withdrawing self from the rest of the family, refusing to participate in group activities;
- Blaming self unfairly for anything that goes wrong.
- Most adolescents with autism excel in one or two subjects. They tend to accumulate a lot of information on the subject and love to talk about it over and over.

Unfortunately, after one point family members end up losing interest and start getting bored to death. Rather than avoiding the subject, try finding out new ways to engage the youngster in the subject. Structure the topic in a different way. Find a way to challenge the youngster. Be creative and let the sky be the limit! If the youngster finds that parents are interested, that will make the youngster feel better about self, realising that the youngster's mastery his mastery on the subject will boost his self-esteem.

Many adolescents with autism resolve their sense of loss by turning the issue upside down: Rather than clinging to depression and despair, they find their *identity* in autism. They get in touch with other youths with autism. They take on themselves educating their peers about autism at school. They set up web sites, chat rooms and even write books about it. They gather support for a better understanding and treatment of autism.

Encouraging the youngster, your child, providing him means to this end and removing the obstacles in front of him may turn out to be the best antidepressant treatment ever. All this may seem remote and you may not know where to start.

4.2.2 Acknowledging Sexuality

In contrast with their rather slow social development and maturation, adolescents with autism develop physiologically and sexually at the same pace as their peers. As their sons and daughters with autism grow older and display sexualised behaviour, many parents find themselves worrying that their child's behaviour will be misunderstood or that their child will be taken advantage of.

For instance, they may be worried that their daughter will get pregnant or their son will impregnate someone else's daughter. Another concern may be that their child will not have the opportunity of enjoying sexual relationships; or that their child will contract sexually transmitted diseases etc.

While some parents get concerned that their children show no interest in sexual matters, others have to deal with behaviours like the following:

- touching private parts of own in public;
- stripping in public;
- masturbating in public;
- touching others inappropriately;
- staring at others inappropriately; and
- talking about inappropriate subjects.

Talking about sex, especially the sexuality of the adolescent makes the parents feel uncomfortable. Even though parents wish that their youngster have safe and fulfilling sexual lives, we hope the issue just gets resolved by itself, or at least somebody else takes the responsibility of resolving it.

They may find themselves lost trying to imagine their children having significant problems such as inability to carry on a simple conversation, building relationships that may lead to healthy sexuality. Parents may find it comforting to believe that their children do not have sexual needs and feelings, and avoid bringing up the subject in any shape or form.

They may feel uneasy about sex education, believing that ignorance will prevent sexual activity.

The main issue is for the parents to make up their mind regarding addressing the sexual issue rather than avoid it. They have to set up a time with their child to talk about sexuality, rather than making a few comments about it when the issue is hot. There is no point talking about the issue when it is raw and right after the incident. when everybody feels quite emotional about what just has happened.

It is important for parents to ask direct questions about what the youngster knows about sex, his desires and worries. It is for the parents to inform the youngster and tell him or her they parents think should be his first step. *After* inquiring and talking about the normal behaviour, the parents should set realistic but firm limits about inappropriate behaviour.

Seeing parents level of comfort around the issue, the youngster will get the message that it is OK to have sexual feelings and it is OK to talk about them. Getting this message alone will bring the tension around sexuality a few notches down. If this approach is fair, parents should not feel shy about asking for help. Other parents with

Development During Adolescence

adolescent children would be a good starting point. Another is the youngster's school may also be able to help. Finally, parents may inquire about professional help which should provide:

- an *individualized* sexuality assessment
- sex education based on individual needs
- utilise behavioural modification techniques to discourage inappropriate sexual behaviour and promote appropriate sexual behaviour.

4.2.3 Change in the Point of Views

In this period, adolescents manifest clear sexual identity and are concerned with serious relationships. They are able to love others tenderly and have a capacity for sensual love. Self-esteem and personal dignity become important to them. They want that they should be respected and treated as adults. They can even offer useful insight on many things, and can set goals for themselves and follow them through. By this time, teenagers learn self-regulation and accept social institutions and cultural traditions more easily. There can be mental and emotional problems involved, but most of them are treatable with the help of an expert professional.

4.2.4 High-risk Behaviours

Late adolescence represents a unique period of transition between youth and adulthood. These youngsters are usually considered to be a healthy group but may also develop many chronic medical problems around this time.

A few health problems, such as eating disorders, are actually unique to this group of late adolescents. They are constantly concerned about their looks and do not want to become obese. Thus they tend to starve at this time and develop eating disorders.

Also this is the age when they develop high-risk behaviours. They experiment with drugs, alcohol, smoking, adventurous sport and many more. Many of these behaviours are a challenge to the existing norms and systems. They tend to defy the norms and take risks. Through such behaviours they try to convince themselves and their peers and parents that they are grown ups.

During adolescence, children develop the ability to:

- Comprehend abstract concepts, such as higher mathematical concepts, and develop moral philosophies, including rights and privileges
- Establish and maintain satisfying personal relationships by learning to share intimacy without inhibition or dread
- Move gradually towards a more mature sense of identity and purpose
- Question old values without a sense of dread or loss of identity

Self Assessment Questions

1) Answer the following in True (T) or False (F):

- i) An early adolescent is the time when there is a transition from high school to the world of university. ()
- ii) The teenage has to deal with all changes at the same time which is extremely challenging. ()

- iii) Adolescents yearn to develop a unique independent identity separate from their parents. ()
- iv) Adolescents are able to love others tenderly and have a capacity for sensual love. ()
- v) Early adolescents commonly experience with drugs, alcohol, smoking adventure sports, etc. ()

2) Fill in the blanks:

- i) Adolescence is a period when a person changes in _____, _____, _____ and _____ characters.
- ii) Sexuality of adolescents makes the parents feel _____.
- iii) _____ and personal dignity becomes important to adolescents.
- iv) Adolescents are a period that is full of _____.
- v) Adolescents in order to look good tend to starve and may develop _____.

4.3 LET US SUM UP

Adolescence can be described as a phase of life beginning in biology and ending in society. Adolescence may be defined as the period within the life span when most of a person's biological, cognitive, psychological, and social characteristics are changing from what is typically considered childlike to what is considered adult-like. For the adolescent, this period is a dramatic challenge, one requiring adjustment to changes in the self, in the family, and in the peer group.

Understandably, then, for both youngsters and their parents, adolescence is a time of excitement and of anxiety; of happiness and of troubles; of discovery and of bewilderment; and of breaks with the past and of links with the future. Adolescence can be a confusing time—for the adolescent experiencing this phase of life, for the parents who are nurturing the adolescent during his or her progression through this period, and for other adults charged with enhancing the development of youth during this period.

The hopes, challenges, fears, and successes of adolescence have been romanticised or dramatised in novels, short stories, and news articles. It is commonplace to survey a newsstand and to find a magazine article describing the “stormy years” of adolescence, the new crazes or fads of youth, or the “explosion” of problems with teenagers (e.g. crime or sexuality).

Adolescents yearn to develop a unique and independent identity, *separate* from their parents'. Yes, they love their parents, but they don't simply want to follow their foot steps. They challenge their parents in any way they can. They disobey their rules; criticize their “old fashioned” values; they discard their suggestions.

During adolescence, parents should play a highly supportive role. They have all the necessary experience, resources and maturity to make this transition as easy as possible. Parents have to first of all understand the convoluted and conflicting requirements of a teenager.

Development During Adolescence

During adolescence, a teenager is trying to carve out his or her own identity that is completely separate from the parents. No doubt teenagers love their parents, but they do not want to follow in the foot steps of the parents. They try to challenge their parents' authority in every possible way and also pay no heed to suggestions given by their parents.

Youngsters with autism bring their special flavor to the adolescence, essentially determined by the levels of three ingredients: interest, avoidance and insight.

Regardless of the individual developmental route, most children with autism start realising that they are not quite like others at some point during their adolescence. Once the adolescent realises that he has significant difficulties in conducting social relationships compared to his peers, he needs deal with this loss, just like dealing with another loss. Understanding the thoughts, feelings and behaviour of an adolescent with autism is the necessary first step in helping him out and being there for him.

In this period, adolescents manifest clear sexual identity and are concerned with serious relationships. They are able to love others tenderly and have a capacity for sensual love. Self-esteem and personal dignity become important to them. They want that they should be respected and treated as adults. They can even offer useful insight on many things, and can set goals for themselves and follow them through. By this time, teenagers learn self-regulation and accept social institutions and cultural traditions more easily. There can be mental and emotional problems involved, but most of them are treatable with the help of an expert professional.

Late adolescence represents a unique period of transition between youth and adulthood. They are usually considered to be a healthy group but many chronic medical problems may also begin during this time.

4.4 UNIT END QUESTIONS

- 1) What are the various Challenges of Adolescence?
- 2) How do youngsters cope with the Loss of Normalcy?
- 3) How to make youngsters acknowledge sexuality?
- 4) What are the various types of change in the youngster's point of view?
- 5) What are high risk behaviours? Give suitable examples and discuss the remedial measures and preventive measures.

4.5 ANSWERS TO THE SELF ASSESSMENT QUESTIONS

Self Assessment Questions

- 1) i) False
ii) True
iii) True
iv) True
v) False

- 2) i) Biological; cognitive; psychological; and social
- ii) Uncomfortable
- iii) Self-esteem
- iv) Challenges
- v) Eating disorders



UNIT 1 PHYSICAL CHANGES (EARLY ADULTHOOD, MIDDLE AGE, OLD AGE)

Structure

- 1.0 Introduction
- 1.1 Objectives
- 1.2 Early Adulthood
 - 1.2.1 Physical Changes
- 1.3 Middle Age/ Middle Adulthood
 - 1.3.1 Physical Changes
- 1.4 Old Age
 - 1.4.1 Physical Changes
- 1.5 Let Us Sum Up
- 1.6 Unit End Questions
- 1.7 Answer to the Self Assessment Questions
- 1.8 Suggested Readings

1.0 INTRODUCTION

The distinction between childhood and adulthood varies considerably among cultural and social groups. The personal and social significance of the passage of years is shaped by the cultural age system. All societies divide the lifespan into recognised stages. These life stages or periods are marked by certain physical, psychological and social milestones. The life stages are commonly identified as prenatal stage (from conception until birth), infancy (from birth to the end of second year of life), early childhood (ages three to six years), middle childhood (six years until puberty), adolescence (start of puberty to adulthood), young adulthood (ages twenty to forty), middle adulthood (ages forty to sixty-five) and later adulthood or old age (sixty-five and older). This unit will help you understand the physical changes of all the three stages of adulthood.

Early adulthood is the stage of our life between the ages of about 20-40 years old, who are typically vibrant, active and healthy, and are focused on friendship, romance, child bearing and careers. It is the first stage of adulthood in which the body physically changes and is one of the hardest times in our lives after teenage years. In this stage, a person may continue to add a bit of height and weight to her teenage frame. The body continues to undergo significant hormonal changes.

In middle adulthood, an important challenge is to develop a genuine concern for the welfare of future generations and to contribute to the world through family and work.

Midlife is also viewed as a period of creativity and significant contribution to society. It is found that the best works of scientists, writers and artists are produced during the late forties and early fifties. Middle adulthood is the second stage of adulthood in which one of the most noticeable change is loss of elasticity in the skin, especially in the face. This results in lines and wrinkles that are seen as one of the first signs of ageing.

Late adulthood or old age is the period of life in every individual that follows the period of his or her life after he/she turns 65 years of age. Old age consists of ages nearing or surpassing the average life span of human beings, and thus the end of the human life cycle. This period is marked by the process of growing old, resulting in part from the failure of body cells to function normally or to produce new body cells to replace those that are dead or malfunctioning.

1.1 OBJECTIVES

After going through this unit, you will be able to:

- discuss and understand the period of early adulthood;
- understand the physical changes during early adulthood;
- discuss and understand the period of middle adulthood;
- understand the physical changes during middle adulthood;
- discuss and understand the period of old age; and
- understand the physical changes during old age.

1.2 EARLY ADULTHOOD

Early adulthood is the stage of our life between the ages of about 20-40 years old, who are typically vibrant, active and healthy, and are focused on friendship, romance, child bearing and careers. It is the first stage of adulthood in which the body physically changes and is one of the hardest times in our lives after teenage years. One has to deal with so much in this time and it seems to be real time of self search as well as preparation. During this time in our life we find ourselves with a new sense of independence and for the first time in life we really feel free. However, along with that comes a lot of added personal responsibility to both ourselves and others and we really begin to learn more about ourselves as well as others through social interaction.

During the period of young adulthood one sees himself or herself as an autonomous and independent adult. In this period the individual becomes financially less dependent on the parental family. A major development task is during this period is the choice of a career. Young men and women tend to settle down in a career of their choice. In addition a young adult tries to settle down and start a family life. They are also concerned about various social issues and forming close relationships with one's professional peers and members of community. The duties of a person demand two fold responsibilities which are towards oneself as well as the society.

The stage of young adulthood is characterised by new tasks and challenges in life such as establishing financial and emotional independence and entering into marital relationship. Unemployment and marital discord are two typical crisis conditions during early adulthood.

According to Erickson, this period is characterised by a crisis of intimacy versus isolation. The young adults must develop the ability to form deep intimate relationships with others particularly in marriage. Otherwise, they can become socially and emotionally isolated. Most young adults develop a dream of future accomplishments or a vision of what they want to achieve as a life goal. Such dreams motivate the young adults towards goal directed efforts. Occupational and marital choices and establishment of social and economic independence are some major tasks of early adulthood.

According to Sigmund Freud, adulthood is a time for work and love. Our lives centers around our careers and relationships, leaving less time for anything else.

1.2.1 Physical Changes

In this stage, a person may continue to add a bit of height and weight to her teenage frame. The body continues to undergo significant hormonal changes. These changes may make beards grow a bit thicker and the voice to become a slightly deeper and richer. This is the period in which women usually have children so it is the time in which women gain a little weight and finish their full breast development.

The Transition from Adolescence to Adulthood

The age period from 18 to 25 years has been labeled as “emerging adulthood” as individuals have often left dependency of childhood but have not yet assumed adult responsibilities.

Females reach their adult heights by age 18, and, except for some males who continue to grow in their early 20s, most have reached their adult heights by the age of 21. However, muscles continue to gain mass- especially among males, and both genders continue to add body fat. Average weight gain for both men and women is about 15 pounds.

1.3 MIDDLE AGE/MIDDLE ADULTHOOD

In middle adulthood, an important challenge is to develop a genuine concern for the welfare of future generations and to contribute to the world through family and work. This period is aged between 40-60 years of life.

Erik Erickson refers to the problem posed at this stage as generativity versus self absorption. He characterises the middle adulthood as a phase of crisis. Unless a person makes this period of meaningful contribution he or she may become preoccupied with selfish needs and desires. The midlife transition is also the period of turbulence of the forties.

From the period of twenties and thirties, the individual arrives at middle age in the forties and fifties. Middle age is characterised by competence, maturity, responsibility and stability. This is the time when one wants to enjoy the success of job, satisfaction derived from the family and social life. People look forward to the success of their children. Attention gets more focused on health, the fate of children, ageing parents, the use of leisure time and plans of old age.

Midlife is also viewed as a period of creativity and significant contribution to society. It is found that the best works of scientists, writers and artists are produced during the late forties and early fifties.

1.3.1 Physical Changes

Individuals vary in the rate at which the changes occur, all middle aged people notice signs of deterioration in some aspects of their physical functioning. Very often, during the early thirties individuals make a reappraisal of their choices and seek to make specific changes in their career choices as well as their social relations. These experiences are described as “age thirty transition”. In the 40s, for example, there is usually a decline in near vision a condition known as presbyopia. The lens of the eyes become less elastic and loses its ability to accommodate to objects at close range. Reading glasses or bifocal may be required for the first time. The individual

Adulthood and Ageing

may also notice increased sensitivity to glare on the windshield of the car, for example, or in brightly lit stores. In their 50s people often find that it takes their eyes longer to adapt to the change in illumination when they enter a darkened theater or when they go outside on a bright sunny day. Some degrees of hearing loss is also found in many people over 50.

Middle adulthood is the second stage of adulthood in which one of the most noticeable change is loss of elasticity in the skin, especially in the face. This results in lines and wrinkles that are seen as one of the first signs of ageing. Most individuals get a little shorter through the years. Hair starts graying, skin is wrinkling, bodies are sagging and teeth are yellowing. Some adults strive to make themselves look younger by having plastic surgery, dyeing their hairs, wearing wigs, joining exercise programs or taking heavy vitamin doses.

Men usually gain weight in the abdominal region, while women gain weight in the hips and thighs. Strength and flexibility in both genders wane. Men during this period show greater concern towards their health, strength, power and sexual potency.

For women, menopause occurs between the ages of forty-five and fifty. Women usually experience hormonal changes during this period that result in the loss of the ability to reproduce, a process called menopause. Menopause is supposed to be accompanied by some distressing physical and psychological symptoms in women. Both genders may experience graying of the hair or hair may be thin.

Self Assessment Questions

1) Answer the following in True or False:

- i) Young adults are vibrant, active and healthy.
- ii) Young adults tend to get isolated due to crisis.
- iii) Individual add a bit of height during middle adulthood.
- iv) Attention gets focused on health and fate of children during middle age.
- v) Individuals in middle age are unstable.

2) Fill in the blanks:

- i) A decline in near vision is a condition known as _____.
- ii) During middle age, there is a loss of _____ in skin.
- iii) Women between the ages of 45 and 50, experiences _____.
- iv) Early adult's focus on friendship, romance, _____ and careers.
- v) Individuals due to crisis, tends to get _____ during middle adulthood.

1.4 OLD AGE

Late adulthood or old age is the period of life in every individual that follows the period of his or her life after he/she turns 65 years of age. Old age consists of ages nearing or surpassing the average life span of human beings, and thus the end of the human life cycle. People can be considered old because of certain changes in their activities or social roles. Old people have limited regenerative abilities and are more

prone to disease, syndromes, and sickness than other adults. For example, people can be considered as old when they become grandparents, or when they begin to do less or different work, or when they get to the age of retirement.

This period is marked by the process of growing old, resulting in part from the failure of body cells to function normally or to produce new body cells to replace those that are dead or malfunctioning. This in turn results in significant physical, psychological and cognitive changes, like cardio-vascular, digestive malfunctioning, depression, and impaired memory functioning and so on.

1.4.1 Physical Changes

As an individual moves towards their old age, there are changes which occurs naturally and not due to any disease. These changes include sensory changes, digestion, circulation and sexuality. The physical changes that occur in the bodies of the individuals can be divided into two main categories – external changes and internal changes. These changes are the outward signs of ageing, and are quite obvious to notice. They consists of changes in hair, skin, posture, etc. most people's hair becomes distinctly gray and eventually turns white, and it may also thin out. The skin becomes less elastic, more wrinkled, dry and thin. The wrinkles are formed partly because of loss fatty tissue under the skin.

Functional age is the actual competence and performance a person displays, regardless of chronological age. People age biologically at different rates:

Young-old elderly appear physically young for their years.

Old-old elderly appear frail and show signs of decline.

Sensory Changes

Human receives and process information from the environment through hearing, vision, taste, smell and touch. With ageing, these senses are often diminished and incoming information may be distorted or difficult to understand. As a result, the older person may give up some enjoyable activities or lose contact with friends and family who are important sources of support.

Hearing

Hearing loss affects the older persons ability to talk easily with others. According to studies, about 30% of people over 60 have a hearing impairment, but about 33% of those 75 to 84, and about half of those over 85, have hearing loss. For example, older people have trouble hearing higher pitched tones. They also may not be able to make out sounds or words when there is background interference

Older persons may be frustrated or embarrassed about not being able to understand what is being said. They may have to ask people to repeat themselves, or endure shouting when a speaker tries to be heard. Older persons may hold back from conversation out of a fear of making inappropriate comments. They may tire from concentrating and straining to hear. As a result, the older person may withdraw from friends and family and outside activities.

Vision

Even though changes to the eye take place as a person ages, many older people have good-to-adequate vision. Nevertheless, beginning in the late 30s and early 40s, an individual may begin to notice some changes. She or he may have to hold the

Adulthood and Ageing

paper farther away to read it due to changes in the ability of the lens to change its shape to accommodate to distance.

With ageing, peripheral vision is reduced. A person may need to turn her or his head to see to the sides. The flexibility of the eye decreases and it takes an older person more time to accommodate to changes in light. Adaptations in lifestyle and behaviours must be made to cope with this change. An individual might give up driving at night. Placing more lights evenly around the room so that the entire room is lit is also helpful.

Degeneration of eye muscles and clouding of the lens are associated with ageing. Several changes in vision result from this. Older people tend to have trouble focusing on near objects, but eyeglasses may correct this problem. In addition, the ability to see colors changes with age as the lens yellows. Red, yellow, and orange are easier to see than blue and green. This is why fabrics in warmer shades may be more appealing to the older person.

- i) Cataracts are cloudy areas in the lens which blur vision and can cause blindness if there is no surgery. There is poorer dark adaptation when coming in from the light. Depth perception is also compromised since binocular vision declines, as well as visual acuity.
- ii) Macular degeneration occurs when light-sensitive cells in the macula, the central region of the retina break down, resulting in blurry central vision, and eventual blindness. A diet high in anti-oxidants can delay this condition. Driving may need to be curtailed at a certain point, as the older driver has a harder time discriminating the road distractions and signs. This is a hard thing to give up, since it signals physical dependence on others. Elders also are at higher risk of stumbling and serious falls at this point, as they don't see changes in the floor and accommodate smoothly.

Taste and Smell

Some loss in taste sensitivity takes place with ageing. However, the loss is minor and does not seem to occur in most people until well after 70. There is also a loss of smell, but this is not severe.

Nevertheless, older people often complain that their meals are tasteless or that they no longer like their favorite foods. Most experts feel that these complaints are caused by a sense of loneliness at meals, or an unwillingness or inability to cook. Also, older persons may not buy more enjoyable foods when they have difficulty chewing due to poor dentures or dental problems, or are stretching their food dollars due to a limited budget.

Touch

The skin serves a protective function by buffering us from the environment. Skin changes leave the older person vulnerable to discomfort and harm. Due to reduced sensitivity, heat sources such as heating pads, hot water bottles, and pot handles can hurt the skin before the elder realises that damage is occurring.

An older person may develop a greater sensitivity to cool temperatures and drafts. This is caused by a decline in sweat gland activity, a decrease in the ability to maintain a normal body temperature due to poorer circulation, and a thinning of the skin. Wrinkling, drying, and scaling also occur. The skin tears and breaks more easily, increasing the chance of injury and infection.

The sensation of touch connects us with others no matter what our age. Thus, touch is important in maintaining the elder's emotional well-being. Use of touch during communication should be practiced to show that you are there for support and that you care.

Changes in Bones and Muscles

Ageing adults, especially the very old, are vulnerable to broken bones. In addition, joints stiffen and connecting ligaments between bones lose their elasticity. Hand and foot pain may result.

Although there is no known way to prevent sometimes painful changes in ageing muscles, bones, and ligaments, regular exercise helps to assure continuing mobility in old age. Most physicians feel that walking, along with adequate rest and a nutritious diet, are tremendously valuable for maintaining mobility and fitness in the later years.

It is very important to prevent falls. Due to changes in bone mass and strength, falls often result in injury, hospitalisation, and continued declines in health.

Teeth and Mouth

Older adults are more likely to lose teeth to gum disease than to problems with the teeth themselves. However, with proper personal care, regular checkups, and improved dentistry methods, older people are more able to retain their natural teeth throughout their lives. Older people who do lose their teeth may now expect and demand comfortable, well-fitting, and durable dentures.

Digestion

The digestive system is very sensitive to emotions. An older person may experience an upset stomach or lack of appetite when lonely, depressed, or worried. Regular contact with friends and relatives, through visits and telephone calls, can help prevent these problems.

It is fairly common for older people to have less frequent bowel movements and to suffer from constipation. This is due to changes in tissue and muscles and reduced thirst. Regular exercise, such as a daily walk, can prevent constipation. A well-balanced diet that includes adequate fiber and fluid intake also encourages normal bowel function and minimises the need for laxatives. In contrast, self-prescribed laxatives are an expensive substitute for foods that naturally keep the gastrointestinal system running smoothly, such as bran cereals, fruits, and vegetables. Overuse of laxatives can interfere with the availability of nutrients for healthy body functioning.

Adequate fluid intake is essential for maintaining proper body temperature and functioning of the digestive system. However, some older people make the mistake of limiting their fluid intake in order to avoid frequent urination. Dehydration is a serious problem for the elderly. This is due to their decreased sense of thirst and reduced capacity to conserve water. In addition, laxative abuse, diuretic therapies, infections, immobility, or excessive use of alcohol or caffeine tend to promote dehydration.

Circulation

The older heart slows down and is less able to pump blood through the body than the younger heart. This results in older people having less energy and stamina for physical work. Decreased circulation also contributes to cold sensitivity, particularly in the hands and feet. Because oxygen necessary for proper physical and cognitive

Adulthood and Ageing

functioning is carried through the blood, the elder with poor circulation may experience forgetfulness and other symptoms of poor cognition.

Blood vessels, which play an important role in the circulation of blood throughout the body, lose elasticity as we age. This causes blood to tend to “pool” in the feet and legs. This means that swelling (edema) may occur in the extremities. Consequently, the heart, which undergoes muscle changes as we age, must pump harder in order to carry the blood to all parts of the body.

Changes in circulation make the older person more susceptible to the development of “little strokes” (TIAs) than when younger. Symptoms of such episodes include headache, vision disturbances, loss of balance, confusion, and dizziness when standing quickly from a sitting or reclining position. Because “little strokes” can be harbingers of a larger stroke, consult with the older person’s primary health care provider, should these occur.

Many older people are on medications that impact circulation. Be familiar with these medications, and their side effects. This may prevent complications, which may arise from their use.

Pressure ulcers, a skin problem found in people with limited mobility, are due to impaired circulation. When an older person is unable to move about, tissue may die due to lack of an adequate blood supply to the skin. Areas particularly susceptible to these ulcers are those over bony prominences such as hips, shoulders, elbows, knees, ankles, and the heels of the feet.

Cardiovascular and Respiratory Systems

They are affected by ageing as the heart muscle becomes more rigid and some cells enlarge, thickening the left ventricle. Arteries stiffen and accumulate plaque. So the heart pumps with less force, and blood flow slows. So during activity, sufficient oxygen may not be delivered to critical tissues. Lung tissue also loses elasticity and capacity is reduced by half. The blood absorbs less oxygen and expels less carbon dioxide. People feel more out of breath when exercising. This is more of a problem for people who have smoked, had a high-fat diet, or been exposed to pollutants. Exercise facilitates respiratory function.

Immune system declines as T cells become less effective.

Auto-immune response is a problem when the immune system turns against normal body tissues. This puts elders at risk of infectious diseases, CVD, cancers, rheumatoid arthritis, or diabetes. The more impaired the immune system is, the more at risk the person is to a variety of agents.

Sleep is essential for healthy functioning all one’s life, but as we age, sleep is harder to come by, as elders sleep less, more lightly, and have more trouble going to sleep. Men seem to have more sleep problems than women, due to the enlargement of the prostate gland and the need to urinate more often at night.

Sleep apnea is a condition where breathing ceases for 10 sec. or more, causing the person to awaken with a start to breathe again. This afflicts more men than women, but overweight people have problems with this condition, as more weight is pressing on the lungs, requiring more effort to keep breathing. Legs also move rapidly during the night- “restless legs” and this can disrupt sleep, too. Unfortunately poor sleep can afflict daytime energy, resulting in a cycle of downward energy, even depression.

More prescriptions for sleep aids are given to older adults, but they can have rebound effects later with greater insomnia.

Sexuality

Sexual desires and the physical capacity to engage in sex continue throughout life. Loss of interest in sex is usually due to emotional causes, drug use, or disease, and not necessarily to ageing. Changes in sexual response and in the sex organs lead to changes in frequency and pattern of performance. However, the older person's own health and a healthy and willing partner are important factors in sexual expression. Sharing feelings and closeness with another person are very important to sustaining emotional and physical intimacy.

Physical Disabilities

They do increase toward the end of the lifespan, especially illnesses such as CVD and cancer. Respiratory diseases also climb in late adulthood – emphysema is caused by loss of elasticity in lung tissue – most result from smoking. As the immune system declines, more people are at risk of pneumonia, severe lung inflammation. Stroke is 4th most common killer in the elderly. There is a blockage of blood flow in the brain which leads to death of neural tissue and accompanying loss of function. Osteoporosis rises in late adulthood, as well as arthritis. Adult-onset diabetes and unintentional injuries also increase in late adulthood. These illnesses are not caused by ageing, but are related to age – they occur more often in the aged.

Primary ageing – biological ageing that occurs even in the context of good health.

Secondary ageing – is declines in function due to hereditary defects and negative environmental influences, poor diet, lack of exercise, disease, substance abuse, environmental pollution, and stress.

Arthritis is a condition of inflamed, painful, stiff or swollen joints and muscles. There are two forms:

Osteo-arthritis is the most common type – due to deteriorating cartilage on the ends of bones – “degenerative joint disease”. Cartilage that cushions the bones in joints deteriorates, so there is more discomfort with movement. Obesity can place abnormal pressure on joints and damages cartilage, too.

Rheumatoid arthritis is an autoimmune disease that involves the whole body. There is inflammation of connective tissue, there is stiffness, inflammation, and aching. Deformed joints develop, reducing mobility.

Adult-onset diabetes occurs when the insulin output of the pancreas can't control blood sugar after a meal. High blood sugar damages the blood vessels, increases risk of stroke, heart attack, circulatory problems in the legs, and injury to the eyes, kidneys, and nerves. If there is severe loss of blood flow, it can result in amputations and blindness. It may require oral insulin or even shots to maintain blood sugar in the healthy range.

Unintentional injuries- death rate from injuries increases after age 65- mostly due to car collisions and falls.

Motor vehicle accidents are responsible for ¼ of injury mortality later in life. But older adults have higher rates of traffic tickets, accidents, and fatalities per mile driven than any other age group, except for teens. Deaths due to injury are greater

Adulthood and Ageing

for men than women in late life. Driving is especially impaired as vision is impaired. They also have a slower reaction time, and don't always read and interpret road signs effectively. They are also at risk on foot at intersections when they can't determine when to walk.

Falls – 30% of those over 65, and 40% of those over 80 have had a fall within the past year. Serious injury results about 10% of the time- most commonly a hip fracture. This type of break increases 20% from 65 to 85. It associates with a 12 – 20% increase in mortality. Half never regain the ability to walk without assistance again. Unfortunately, once someone falls, s/he will tend to avoid activities that may be associated with instability, so they restrict social contact and exercise.

Prevention may entail corrective eyewear, improved safety in the home or car, and other family members taking on some of the responsibility for the elder's transportation.

Self Assessment Questions

3) Answer the following in True or False:

- i) Old age starts from the age of 50 years. ()
- ii) Old people have limited regenerative abilities and are more prone to disease, syndromes, and sickness than other adults. ()
- iii) Young-old elderly appear frail and show signs of decline. ()
- iv) With ageing, peripheral vision is reduced. ()
- v) The older heart slows down and is less able to pump blood through the body than the younger heart. ()

4) Fill in the blanks:

- i) Degeneration of eye muscles and _____ of the lens are associated with ageing.
- ii) The skin serves a _____ function by buffering us from the environment.
- iii) Regular exercise, such as a daily walk, can prevent _____.
- iv) Immune system declines as _____ become less effective.
- v) _____ is a condition of inflamed, painful, stiff or swollen joints and muscles.

1.5 LET US SUM UP

Early adulthood is the stage of our life between the ages of about 20-40 years old, who are typically vibrant, active and healthy, and are focused on friendship, romance, child bearing and careers. It is the first stage of adulthood in which the body physically changes and is one of the hardest times in our lives after teenage years. During the period of young adulthood one sees himself or herself as an autonomous and independent adult. In this period the individual becomes financially less dependent on the parental family. A major development task is during this period is the choice of a career. The stage of young adulthood is characterised by new tasks and challenges in life such as establishing financial and emotional independence and entering into marital relationship. Unemployment and marital discord are two typical crisis conditions during early adulthood.

Females reach their adult heights by age 18, and, except for some males who continue to grow in their early 20s, most have reached their adult heights by the age of 21. However, muscles continue to gain mass – especially among males, and both genders continue to add body fat. Average weight gain for both men and women is about 15 pounds.

In middle adulthood, an important challenge is to develop a genuine concern for the welfare of future generations and to contribute to the world through family and work. This period is aged between 40-60 years of life. From the period of twenties and thirties, the individual arrives at middle age in the forties and fifties. Middle age is characterised by competence, maturity, responsibility and stability. This is the time when one wants to enjoy the success of job, satisfaction derived from the family and social life. People look forward to the success of their children.

Middle adulthood is the second stage of adulthood in which one of the most noticeable change is loss of elasticity in the skin, especially in the face. This results in lines and wrinkles that are seen as one of the first signs of ageing. Most individuals get a little shorter through the years. Hair starts graying, skin is wrinkling, bodies are sagging and teeth are yellowing. Some adults strive to make themselves look younger by having plastic surgery, dying their hairs, wearing wigs, joining exercise programs or taking heavy vitamin doses.

Late adulthood or old age is the period of life in every individual that follows the period of his or her life after he/she turns 65 years of age. Old age consists of ages nearing or surpassing the average life span of human beings, and thus the end of the human life cycle. People can be considered old because of certain changes in their activities or social roles. Old people have limited regenerative abilities and are more prone to disease, syndromes, and sickness than other adults.

Functional age is the actual competence and performance a person displays, regardless of chronological age. The ageing body does change. Some systems slow down, while others lose their “fine tuning”. Slight gradual change is common, and most of these are not problems to the person who experiences them. Serious and dramatic change may indicate serious health problems.

As an individual moves towards their old age, there are changes which occurs naturally and not due to any disease. These changes include sensory changes, digestion, circulation and sexuality. The physical changes that occur in the bodies of the individuals can be divided into two main categories – external changes and internal changes. These changes are the outward signs of ageing, and are quite obvious to notice. They consist of changes in hair, skin, posture, etc. most people’s hair becomes distinctly gray and eventually turns white, and it may also thin out. The skin becomes less elastic, more wrinkled, dry and thin. The wrinkles are formed partly because of loss fatty tissue under the skin.

1.6 UNIT END QUESTIONS

- 1) What are the physical changes that take place in early adulthood?
- 2) What are the developmental tasks during this period?
- 3) What are the physical changes that take place in middle adulthood?
- 4) What are the developmental tasks of this period?
- 5) What are the physical changes that take place during old age?
- 6) What are the developmental tasks of this period?

1.7 ANSWERS TO THE SELF ASSESSMENT QUESTIONS

- 1)
 - i) True
 - ii) True
 - iii) False
 - iv) True
 - v) False
- 2)
 - i) Presbyopia
 - ii) Elasticity
 - iii) Menopause
 - iv) Child Bearing
 - v) Self absorption
- 3)
 - i) False
 - ii) True
 - iii) False
 - iv) True
 - v) True
- 4)
 - i) Clouding
 - ii) Protective
 - iii) Constipation
 - iv) T Cells
 - v) Arthritis

1.8 SUGGESTED READINGS

Stuart-Hamilton, Ian (2006). *The Psychology of Ageing: An Introduction*. London: Jessica Kingsley Publishers

Diane F. Gilmer; Aldwin, Carolyn M. (2003). *Health, illness, and optimal ageing: biological and psychosocial perspectives*. Thousand Oaks: Sage Publications

UNIT 2 COGNITIVE CHANGES (EARLY ADULTHOOD, MIDDLE AGE, OLD AGE)

Structure

- 2.0 Introduction
- 2.1 Objectives
- 2.2 Early Adulthood
 - 2.2.1 Cognitive Changes
- 2.3 Middle Adulthood
 - 2.3.1 Cognitive Changes
- 2.4 Old Age
 - 2.4.1 Cognitive Changes
- 2.5 Let Us Sum Up
- 2.6 Unit End Questions
- 2.7 Suggested Readings
- 2.8 Answers to the Self Assessment Questions

2.0 INTRODUCTION

Young adulthood is a time when most of us finish school, find a career we enjoy, and create a family of our own. The cognitive stages during the early adulthood can be discussed as a period of realistic and pragmatic thinking; reflective and relativistic thinking. According to Piaget, he thought that young adults were quantitatively advanced in their thinking (they have more knowledge), however, they are qualitatively similar. He also believed that adults increase their knowledge in a specific area.

In this unit we will be dealing with all the three stages of adulthood and examine the physical, cognitive and other changes that come about. Particularly the focus will be on cognitive development.

2.1 OBJECTIVES

After going through this unit, you will be able to:

- define and describe the period of early adulthood;
- describe the cognitive changes during early adulthood;
- explain the characteristics of middle adulthood;
- delineate the cognitive changes during middle adulthood;
- define and describe the period of old age; and
- analyse the cognitive changes during old age.

2.2 EARLY ADULTHOOD

Young adulthood is a time when most of us finish school, find a career we enjoy, and create a family of our own. Physically, it is a time where we are our healthiest and will reach our peak performance. Cognitively, it is a time to grow up and make life decisions.

Adulthood and Ageing

Socioemotionally, it is a time to take on roles of independence, lifestyles, marriage, and family.

According to Erik Erikson's eight stages of development, this is a time of intimacy vs. isolation. One either gets involved in an intimate relationship or isolates oneself. According to the literature, many areas of development are paramount during early adulthood.

The cognitive stages during the early adulthood can be discussed as a period of realistic and pragmatic thinking; reflective and relativistic thinking. According to Piaget, he thought that young adults were quantitatively advanced in their thinking (they have more knowledge), however, they are qualitatively similar. He also believed that adults increase their knowledge in a specific area.

Between the ages of 35-60, we find vast changes in many areas of our lives. The most obvious changes related to our lifestyle include: physical development and health, career and finances, marriage, and leisure activities. For many, midlife is a time when they start to think about "how much time they have left". Individuals begin to reexamine their lives, their relationships, their work, and even to question the meaning of it all. This process has been referred to as a mid-life crisis. Clearly, middle adulthood is a time change and development.

Middle adulthood is the period in which an individual changes in their cognitive functioning as concerned to their intelligence: crystallized and fluid; information processing and memory; expertise; career, work and leisure; religion, health and coping; and meaning in life.

While the adult years are generally a time of vitality and good health, there are health concerns. The main health problems of middle adulthood are cardiovascular disease, cancer, and menopause. Another major problem that affects health and behaviour is stress. Overall this is a time of major change and development physically and mentally.

During the middle adult years there is a noticeable change in how adults view their careers. By this time most individuals have settled into their careers and between the ages of 40-45 have ceased to advance up the career ladder. In general, job satisfaction and commitment tend to be high and continue to increase into our sixties.

It is also at this time that adults adjust their idealistic hopes to realistic possibilities. This adjustment to attainable goals is dependent on how much time is left before retirement, with retirement planning being a major area of financial concern. These reassessments may lead to stress and sadness over unaccomplished goals, which for a small few may lead to a midlife career change.

Crystallized intelligence improves through middle age and on. The ability to remember and use information acquired over a lifetime is increased, and also depends on education and culture of the individual. An individual is able to use stored information's and process automatically in their daily lives.

Many psychologists believe that fluid intelligence was primarily genetic and that crystallized intelligence was primarily learned. This nature-nurture distinction is probably invalid, in part because the acquisition of crystallized intelligence is affected by the quality of fluid intelligence.

Another financial adjustment that tends to take place for many midadults is the planning for college and setting aside the necessary funds for their children. In response to these growing financial needs and greater free time, due to their children getting older, many women enter or reenter the workforce. In short, this tends to be a time of career and financial readjustment and planning for both men and women.

Leisure holds an important place in helping adults to deal with life experiences. Not only does leisure enhance one's well-being it is also a buffer to the stresses of life.

Early adulthood is the stage of our life between the ages of about 20-40 years old, which are typically vibrant, active and healthy, and are focused on friendship, romance, child bearing and careers. It is the first stage of adulthood in which the body physically changes and is one of the hardest times in our lives after teenage years. One has to deal with so much in this time and it seems to be real time of self search as well as preparation. During this time in our life we find ourselves with a new sense of independence and for the first time in life we really feel free. However, along with that comes a lot of added personal responsibility to both ourselves and others and we really begin to learn more about ourselves as well as others through social interaction.

Young adulthood is a time when most of us finish school, find a career we enjoy, and create a family of our own. Physically, it is a time where we are our healthiest and will reach our peak performance. Cognitively, it is a time to grow up and make life decisions.

2.2.1 Cognitive Changes

The cognitive stages during the early adulthood can be discussed as a period of realistic and pragmatic thinking; reflective and relativistic thinking. According to Piaget, he thought that young adults were quantitatively advanced in their thinking (they have more knowledge), however, they are qualitatively similar. He also believed that adults increase their knowledge in a specific area.

Realistic and Pragmatic Thinking

Realistic thinking means looking at all aspects of a situation (the positive, the negative, and the neutral) before making conclusions. In other words, realistic thinking means looking at yourself, others, and the world in a *balanced* and *fair* way.

Some experts argue that the idealism of Piaget's formal operational stage declines in young adulthood, replaced by more realistic, pragmatic thinking. Schaie argues that adults use information differently than adolescents.

According to K. Warner Schaie, adults progress beyond adolescents only in their use of intellect. We typically switch from actually acquiring knowledge to applying that knowledge in our everyday lives. To support his theory of development, he included the following two stages to describe the cognitive changes in adults:

- *Achieving Stage*

Involves applying one's intelligence to situations that have profound consequences on achieving long term goals, such as those involving careers. This stage of development includes mastering the cognitive skills needed to monitor one's own behaviour. Young adults in this stage will also acquire a considerable amount of independence.

- *Responsibility Stage*

This stage of development begins in early adulthood and extends into middle adulthood. This is the time when a family is established and attention is given to the needs of a spouse and children. Young adults incur social responsibilities, deal with starting a career, and must take on some level of responsibility for others at work and in the community.

According to Labouvie-Vief, there are many changes that take place in the thinking of young adults, including a new integration of thought. Young adults rely less on logical analysis when solving problems. Idealised logic is replaced with commitment, and youth

focus their energy on finding their niche in the work place and society. During young adulthood, logical skills don't decline because cognitive abilities are strong.

Reflective and Relativistic Thinking

William Perry said that adolescents often engage in dualistic, absolute thinking, whereas adults are more likely to engage in reflective, relativistic thinking. The term dualistic thinking is used to describe an adolescents view of the world. Everything is seen in the polar terms or opposites. Examples for this are right/wrong or good/bad.

As youth mature, dualistic thinking is replaced by multiple thinking. They gradually become aware of the diversity of opinion in other people and realise that authority may not have all the answers. Young adults begin to create their own style of thinking, and believe that others are entitled to the opinion they hold and that one opinion is good as anyone's else's. This leads to the next form of thinking, relative subordinate thinking. Here, personal opinions begin to be challenged by others, and a logical evaluation of knowledge is actively pursued. This leads to the final form of thinking, which is full relativism. In this stage of thinking, young adults completely understand that truth is relative, and knowledge is constructed and not given, contextual and not absolute.

Post formal thought is qualitatively different than Piaget's formal operational thought. It involves understanding that the correct answer to a problem requires reflective thinking, may vary from one situation to another, and that the search for truth is often an ongoing, never-ending process. Along with this is the belief that solutions to problems need to be realistic and that emotion and subjective factors can influence thinking.

2.3 MIDDLE ADULTHOOD

Middle age is the period of age beyond young adulthood but before the onset of old age. Various attempts have been made to define this age, which is around the third quarter of the average life span of human beings.

In middle adulthood, an important challenge is to develop a genuine concern for the welfare of future generations and to contribute to the world through family and work. This period is aged between 40-60 years of life.

From the period of twenties and thirties, the individual arrives at middle age in the forties and fifties. Middle age is characterised by competence, maturity, responsibility and stability. This is the time when one wants to enjoy the success of job, satisfaction derived from the family and social life. People look forward to the success of their children. Attention gets more focused on health, the fate of children, ageing parents, the use of leisure time and plans of old age.

Middle aged adults often show visible signs of ageing such as loss of skin elasticity and graying of hair. Physical fitness usually wanes, with a 5-10kg accumulation of body fat, reduction in aerobic performance and a decrease in maximal heart rate. Strength and flexibility also decrease throughout middle age. However, people age at different rates and there can be significant differences between individuals of the same age.

Midlife is also viewed as a period of creativity and significant contribution to society. It is found that the best works of scientists, writers and artists are produced during the late forties and early fifties.

The changes that occur from adolescence to young adulthood may be stressful at times, but between the ages of 19 and 30 we are at our prime physically, and our cognitive skills are becoming finalised. Sure, sometimes it seems like we're dealing with a million things all at once and that one of any number of things could change the rest of our lives,

but that's the best part about it. Young adulthood is when (most of us) decide exactly what it is that we want to do with the rest of our lives whether it's raise a family, start a career, or both.

2.3.1 Cognitive Changes

Middle adulthood is the period in which an individual changes in their cognitive functioning as concerned to their intelligence: crystallized and fluid; information processing and memory; expertise; career, work and leisure; religion, health and coping; and meaning in life.

Intelligence

Cognitive development is multidirectional. It gains in some area and losses in others. Cross sectional measures of intelligence show decreases with age. There may be cohort effect of better or more schooling. Longitudinal measures show increase, at least until the age of 50s. It may be inflated due to practice effects and attrition. Cognitive abilities are more likely to increase than decrease, with exception of arithmetic skills, which begin to shift slightly downwards by age 40.

Fluid intelligence refers to our ability to see relationships, use abstract reasoning, and analyse information. Crystallized intelligence refers to our ability to use knowledge, experience, vocabulary, and verbal memory (Horn & Hofer, 1992). Fluid intelligence declines with age, but crystallized intelligence continues to grow as we learn more during middle age.

- *Fluid Intelligence*

Fluid intelligence is the flexible reasoning and is made up of the basic mental abilities such as inductive reasoning, abstract thinking and speed of thinking required for understanding any subject. It is fast and abstract reasoning, in adults, there is a decline with age. It includes nonverbal abilities and nonverbal puzzle solving, novel logic problems; allows best works at age 20s and 30s by mathematicians, scientists and poets.

Fluid intelligence peaks during the early adulthood and then declines ability to apply mental powers to new problems, perceiving relationships, forming concepts and drawing inferences. It declines probably due to changes in brain. These differences might be due to cohort effects related to educational differences rather than to age.

- *Crystallized Intelligence*

Crystallized intelligence is the verbal reasoning that holds across the lifespan which reflects accumulated knowledge and vocabulary. It allows best works at age of 40s, 50s, and older by historians, philosophers, prose writers. It refers to the accumulation of facts, information and knowledge that comes with education and experience within a particular culture.

Crystallized intelligence improves through middle age and on. The ability to remember and use information acquired over a lifetime is increased, and also depends on education and culture of the individual. An individual is able to use stored information's and process automatically in their daily lives.

Many psychologists believe that fluid intelligence was primarily genetic and that crystallized intelligence was primarily learned. This nature-nurture distinction is probably invalid, in part because the acquisition of crystallized intelligence is affected by the quality of fluid intelligence.

Adulthood and Ageing

Fluid intelligence declines during adulthood, although this decline is temporarily masked by an increase in crystallized intelligence.

IQ tests may lack ecological validity as the reaction time slows down with age and results may be due to physical changes and not cognitive changes.

Robert Sternberg proposed that intelligence is composed of three distinct parts:

- *Analytic / Academic*

It consists of mental processes that foster efficient learning, remembering and thinking. Multiple choice tests, with one and only one right answer reward analytic intelligence. They tend to have an extensive, highly organised knowledge of a particular domain and increase in work satisfaction. There is a greater commitment towards the job. They have greatest physical and psychological well-being. The current middle-aged worker faces more challenges, and increased career challenges lead to career changes. The midlife career changes can be self-motivated or imposed by others.

- *Creative*

Creativity is another important adult skill related to intelligence. Like intelligence, though, it is hard to agree what it is. We know that some kinds of creativity, like writing, peaks during middle adulthood. Creativity and practical intelligence often combine to create people we call experts in their fields, whether repairing cars, farming, writing, or designing a spacecraft.

It involves the capacity to be flexible and innovative when dealing with new situations. Expertise increases in the middle adulthood years. They tend to use the accumulated experience of their life situations to solve problems. There is more creativity and flexibility in their domain than novices.

They prefer to make their own decisions and plans. They prefer their own judgment to that of others and don't tend to back down in the face of criticism or disagreement. They are most resourceful when faced with unique circumstances or problems. They show an imaginative use of many different words. They show more flexibility in their approach to problems, are eager to try new avenues, and are not bound to rules or accepted ideas of the way things work. They show originality and do not often come up with off the shelf solutions.

- *Practical*

It enables the person to adapt his/her abilities to contextual demands. They tend to have a pleasant time after work. They have more time and money to pursue activities and interests. There is decreased rate of heart disease and death due to vacations and leisure. During this time they are preparing themselves for retirement.

Information Processing and Memory

During the middle adulthood the speed of information processing, reaction time, and memory declines. The use of effective memory strategies can decrease the decline.

Religion, Health, Coping and Meaning in Life

Religion and spirituality is an important dimension of life during this stage. A significant increase in religiosity and spirituality is seen during middle age. There is an individual difference in religious interest, as the females show a stronger interest in religion than males do. Positive association of religious participation and longevity is noticed. Religion promotes physical and psychological health and positive functions of religious coping.

According to Victor Frankl, the examining of the finiteness of our existence leads to exploration of meaning in life. Many middle-aged individuals increasingly examine life's meaning.

Self Assessment Questions

- 1) Answer the following statements with True or False:
 - i) Young Adults is the time of freedom and when they find a sense of independence. ()
 - ii) Piaget thought that young adults are not quantitatively advanced in their thinking. ()
 - iii) William Perry gave views about realistic thinking. ()
 - iv) As youth mature, dualistic thinking is replaced by multiple thinking. ()
 - v) Crystallized intelligence is in peak during middle adulthood. ()
- 2) Fill in the blanks:
 - i) Creativity involves the capacity to be _____ and innovative when dealing with new situations.
 - ii) _____ refers to our ability to see relationships, use abstract reasoning and analyse information.
 - iii) _____ means looking at all aspects of situations before making conclusions.
 - iv) Cognitive development is _____.
 - v) Religion and _____ is an important dimension of life during middle adulthood.

2.4 OLD AGE

Late adulthood (old age) is generally considered to begin at about age 65. Erik Erikson suggests that at this time it is important to find meaning and satisfaction in life rather than to become bitter and disillusioned, that is, to resolve the conflict of **integrity vs. despair**. Despite the problems associated with longevity, studies of people in their 70s have shown that growing old is not necessarily synonymous with substantial mental or physical deterioration. Many older people are happy and engaged in a variety of activities. **Gerontology**, an interdisciplinary field that studies the process of ageing and the ageing population, involves psychology, biology, sociology, and other fields.

Late Adulthood is the period in an individual's life beginning at ages sixty or seventy and ending at death. This life period, like any other, is one of continuing change and adjustment both in the physical and the psychosocial realms.

Theories of successful ageing include the following:

The **disengagement theory** states that as people age, their withdrawal from society is normal and desirable as it relieves them of responsibilities and roles that have become difficult. This process also opens up opportunities for younger people; society benefits as more-energetic young people fill the vacated positions.

The **activity theory** contends that activity is necessary to maintain a "life of quality,"

that is, that one must “use it or lose it” no matter what one’s age and that people who remain active in all respects—physically, mentally, and socially—adjust better to the ageing process. Proponents of this theory believe that activities of earlier years should be maintained as long as possible.

Ageism may be defined as the prejudice or discrimination that occurs on the basis of age. Although it can be used against people of all ages, older people are most frequently its target and it may often result in forced retirement. Stereotyping of the elderly is also an aspect of ageism, as seen in such a statement as “He drives like a little old lady.”

2.4.1 Cognitive Changes

Cognitive development is a general loss cognitively as people move closer to the end of life. The study of cognitive changes in the older population is complex. Response speeds (neural and motor) have been reported to decline; some researchers believe that age-related decrease in working memory is the crucial factor underlying poorer performance by the elderly on cognitive tasks.

Selective optimisation with compensation is one means of making best use of their cognitive skills. They narrow their goals, select personally valued activities so as to optimise or maximise returns from their energy. They find means to compensate for losses.

Factors related to Cognitive change – mentally active people are likely to maintain their cognitive abilities into advanced old age. Retirement can bring about changes in cognitive abilities depending on how those years are used. Terminal decline is a steady, marked decrease in cognitive functioning prior to death.

Memory

The older adults are taking in information more slowly, and they use strategies less, can’t inhibit irrelevant information and retrieve important information from long-term memory. So memory failure increases. Slower processing speed means there will be less retained from current activities. They also forget context, which helps us recall information. Recognition memory does not decline as much as free recall.

- Deliberate vs. automatic memory
Implicit memory is memory without conscious awareness. This memory is more intact than deliberate memory, trying to recall information.
- Associative memory
Associative memory deficit is a problem creating and retrieving links between pieces of information. This is more common for elders.
- Remote memory is very long-term recall. It is not any clearer than recent recall for seniors, even though the myth is that seniors remember the past better than recent events.
- Autobiographical memory is memory for your own personally experienced events. Seniors best recall their adolescent and early adulthood experiences better than later life experiences. There was a lot of novelty in those times, as well as life choices being made- spouses, jobs, educational choices. These experiences were more emotionally charged, so they are remembered better. They become part of a person’s life story, and are remembered often.
- Prospective memory is remembering to do planned activities in the future. There is more forgetfulness and absentmindedness as people age. They tend to do better on event-based memory tasks than time-based tasks.

Language processing

The two aspects of language processing diminish in older age: finding the right words and planning what to say and how to say it. Their speech will have more pronouns, unclear references, they will speak more slowly, pause more often, and have trouble finding the right words. There will be more hesitations, false starts, sentence fragments, word repetitions as they age. They tend to simplify their grammatical structures, so they can better retrieve the words they want.

Problem solving

The problem solving declines in late adulthood so married people tend to collaborate more in problem-solving. They will be better at solving problems they think are under their control. They will make more rapid decisions in areas of health, as that is an area they feel they have learned a lot about.

Wisdom includes practical knowledge, ability to reflect on and apply that knowledge, emotional maturity, listening skills, and creativity in a way that helps others. This does increase with age. It occurs as people deal with more difficulties in life and find various means to adapt to change. Those with wisdom tend to have better education and are physically healthier. It requires insight into the human condition and often follows that people with this ability are found in high positions in business and politics and religion.

- Knowledge about fundamental concerns of life: human nature, social relationships, emotions.
- Effective strategies for applying that knowledge to making life decisions, handling conflict, giving advice.
- A view of people that considers multiple demands of their life contexts.
- Concern with ultimate human values, the common good, respect for individual differences in values.
- Awareness and management of the uncertainties of life – many problems have no perfect solution.

Intellectual changes in late adulthood do not always result in reduction of ability. While **fluid intelligence** (the ability to see and to use patterns and relationships to solve problems) does decline in later years, **crystallized intelligence** (the ability to use accumulated information to solve problems and make decisions) has been shown to rise slightly over the entire life span. K. Warner Schaie and Sherry Willis reported that a decline in cognitive performance could be reversed in 40% to 60% of elderly people who were given remedial training.

Retirement

Retirement at age 65 is the conventional choice for many people, although some work until much later. People have been found to be happier in retirement if they are not forced to retire before they are ready and if they have enough income to maintain an adequate living standard. Chronic health problems such as arthritis, rheumatism, and hypertension increasingly interfere with the quality of life of most individuals as they age.

Widowhood

Women tend to marry men older than they are and, on average, live 5 to 7 years longer than men. One study found ten times as many widows as widowers. Widowhood is particularly stressful if the death of the spouse occurs early in life; close support of friends, particularly other widows, can be very helpful.

Death and dying

Death and dying has been studied extensively by Elisabeth Kübler-Ross, who suggested that terminally ill patients display the following five basic reactions.

- **Denial**, an attempt to deny the reality and to isolate oneself from the event, is frequently the first reaction.
- **Anger** frequently follows, as the person envies the living and asks, “Why should I be the one to die?”
- **Bargaining** may occur; the person pleads to God or others for more time.
- As the end nears, recognition that death is inevitable and that separation from family will occur leads to feelings of exhaustion, futility, and deep **depression**.
- **Acceptance** often follows if death is not sudden, and the person finds peace with the inevitable.

People who are dying are sometimes placed in a **hospice**, a hospital for the terminally ill that attempts to maintain a good quality of life for the patient and the family during the final days. In a predictable pattern after a loved one’s death, initial shock is followed by grief, followed by apathy and depression, which may continue for weeks. Support groups and counseling can help in successfully working through this process.

*Cognitive interventions**Lifelong learning*

- Types of programs include Elderhostel, which encourages older adults to live on college campuses and take courses from experts, as well as travel the world. Many universities offer classes at low or no cost for seniors.
- Benefits of continuing education include learning new information, understanding new ideas, making new friends, and developing a broader perspective on the world. This may serve to shake up their stereotypes and value diversity in a new way.

Self Assessment Questions

3) Fill in blanks:

- i) The study of the process of ageing and the ageing population is called _____.
- ii) Ageism is defined as the _____ that occur on the basis of age.
- iii) _____ is the memory without conscious awareness.
- iv) _____ memory is very long term recall.
- v) _____ memory is remembering to do planned activities in the future.

2.5 LET US SUM UP

Young adulthood is a time when most of us finish school, find a career we enjoy, and create a family of our own. Physically, it is a time where we are our healthiest and will

reach our peak performance. Cognitively, it is a time to grow up and make life decisions. Socioemotionally, it is a time to take on roles of independence, lifestyles, marriage, and family.

Erik Erikson, a prominent theorist in the field of emotional development, assigns specific goals to different periods of life. Those in early adulthood are said to be struggling with intimacy as opposed to isolation. This refers to the desire for a stable long-term relationship. Those who have achieved intimacy are thought to host a range of positive attributes, such as confidence and acceptance. Alternatively, those in isolation are more likely to fear loneliness and abandonment. Intimacy requires an individual to sacrifice some of his independence for another person. After successfully traversing the struggle of isolation and intimacy, an individual will deal with generativity, which is the desire to improve society for future generations.

Between the ages of 35-60, we find vast changes in many areas of our lives. The most obvious changes related to our lifestyle include: physical development and health, career and finances, marriage, and leisure activities. For many, midlife is a time when they start to think about “how much time they have left”. Individuals begin to reexamine their lives, their relationships, their work, and even to question the meaning of it all. This process has been referred to as a mid-life crisis. Clearly, middle adulthood is a time change and development.

One of the major aspects of middle adulthood are the physical and biological changes that occur in the body. Two of the most noticeable changes are seeing and hearing. Each of these begin to decline in the middle years. One of the physical changes that occur is in height. Most individuals get a little shorter through the years. Also, hair is graying, skin is wrinkling, bodies are sagging, and teeth are yellowing. Some adults strive to make themselves look younger by having plastic surgery, dying their hair, wearing wigs, joining exercise programs, or taking heavy vitamin doses.

While the adult years are generally a time of vitality and good health, there are health concerns. The main health problems of middle adulthood are cardiovascular disease, cancer, and menopause. Another major problem that affects health and behaviour is stress. Overall this is a time of major change and development physically and mentally.

It is also at this time that adults adjust their idealistic hopes to realistic possibilities. This adjustment to attainable goals is dependent on how much time is left before retirement, with retirement planning being a major area of financial concern. These reassessments may lead to stress and sadness over unaccomplished goals, which for a small few may lead to a midlife career change.

Another financial adjustment that tends to take place for many mid adults is the planning for college and setting aside the necessary funds for their children. In response to these growing financial needs and greater free time, due to their children getting older, many women enter or reenter the workforce. In short, this tends to be a time of career and financial readjustment and planning for both men and women.

Adults demonstrate much variation in their intimate lifestyles. Nearly all of us are married at least some time during our adult lives. Many marriages either improve or deteriorate during middle age. If a couple form a relationship appropriate to this new period of life, their marriage will likely grow stronger. But if they cannot adapt to the new conditions of their lives, their marriage may develop problems. Regardless, intimacy, marriage, and family concerns are a priority during middle adulthood. Some specific issues include the empty nest syndrome, late parenting, divorce, sexuality, remarriage, and grand parenting.

Adulthood and Ageing

Late adulthood (old age) is generally considered to begin at about age 65. Erik Erikson suggests that at this time it is important to find meaning and satisfaction in life rather than to become bitter and disillusioned, that is, to resolve the conflict of **integrity vs. despair**.

Late Adulthood is the period in an individual's life beginning at ages sixty or seventy and ending at death. This life period, like any other, is one of continuing change and adjustment both in the physical and the psychosocial realms.

Cognitive development is a general loss cognitively as people move closer to the end of life. The study of cognitive changes in the older population is complex. Response speeds (neural and motor) have been reported to decline; some researchers believe that age-related decrease in working memory is the crucial factor underlying poorer performance by the elderly on cognitive tasks.

Retirement at age 65 is the conventional choice for many people, although some work until much later. People have been found to be happier in retirement if they are not forced to retire before they are ready and if they have enough income to maintain an adequate living standard. Chronic health problems such as arthritis, rheumatism, and hypertension increasingly interfere with the quality of life of most individuals as they age.

2.6 UNIT END QUESTIONS

- 1) Discuss critically the cognitive changes in early adulthood.
- 2) What are the important cognitive changes that come about in middle adulthood?
- 3) How does old age affect cognitive development?
- 4) Compare age differences in implicit and explicit memory.
- 5) How does each part of information processing system such as the sensory register, short term and long term memory knowledge base etc.?

2.7 SUGGESTED READINGS

P.J. Whitehouse and G.C.Gilmore (eds) (1989). *Memory, Ageing and Dementia*. New York, Springer

S.L.Willis and J.D.Reid (Eds) (1999). *Life In the Middle* . San Diego, CA, Academic Press.

Lachman, M.E.(Ed). (2001). *Handbook of Midlife Development*. New York, Wiley.

2.8 ANSWERS TO THE SELF ASSESSMENT QUESTIONS

- 1)
 - i) True
 - ii) False
 - iii) False
 - iv) True
 - v) True
- 2)
 - i) Flexible
 - ii) Fluid intelligence

- iii) Realistic Thinking
 - iv) Multidimensional
 - v) Spirituality
- 3) i) Gerontology
- ii) Prejudice
 - iii) Implicit memory
 - iv) Remote
 - v) Prospective



ignou
THE PEOPLE'S
UNIVERSITY

UNIT 3 PSYCHOSOCIAL CHANGES (EARLY ADULTHOOD, MIDDLE AGE, OLD AGE)

Structure

- 3.0 Introduction
- 3.1 Objectives
- 3.2 Development During Adult Years
 - 3.2.1 Stage Theories versus the Contextual Approach
- 3.3 Psychosocial Changes During Early Adulthood
 - 3.3.1 Eric Erikson's Theory
 - 3.3.2 Levinson's Seasons of Life Theory
 - 3.3.3 Attachment Patterns and Romantic Relationships
- 3.4 The Family Life Cycle
- 3.5 Psychosocial Changes During Middle Adulthood
 - 3.5.1 Four Developmental Tasks of Middle Adulthood
 - 3.5.2 Individual Differences in Personality Traits
 - 3.5.3 Changing Parent-child Relationships
- 3.6 Psychosocial Changes During Old Age
 - 3.6.1 Stability and Change in Self-Concept and Personality
 - 3.6.2 Relationships in Late Adulthood
 - 3.6.3 Retirement and Leisure
- 3.7 Let Us Sum Up
- 3.8 Unit End Questions
- 3.9 Suggested Readings

3.0 INTRODUCTION

In this unit we will be dealing with development during adult years. The period of adulthood is marked by society's expectation of performing one's duty as an adult. Some special roles and relationship like family and career are the major milestones of adulthood. While discussing development during adult years stage theories will be put forward to explain the adult years. This will be seen in contrast to the contextual theories. This unit will discuss psychosocial changes during early and middle adulthood and the various changes that come about as one grows older. Finally the unit will discuss the various growth and development issues related to old age.

3.1 OBJECTIVES

After going through this unit, you will be able to:

- describe the development during adult years in terms of stage vs Contextual theories;
- explain the psychosocial changes during early adulthood;
- delineate the psychosocial changes during middle adulthood; and
- analyse the psychosocial changes during old age.

3.2 DEVELOPMENT DURING ADULT YEARS

The spurt of growth during adolescence stabilises by adulthood and the individual looks forward to more concrete roles in the society. The capabilities and behaviours of the individuals continue to change as they grow older not only because of the biological growth process but also because of their understanding and the way they interact with their environment.

In the Indian tradition the period of adulthood is referred to as Grihastha ashram. During this stage an individual enters the social life and accepts responsibilities of family, marriage and entering into one's career. The stages of adulthood have sub periods such as young adulthood, middle adulthood and late adulthood.

Perhaps middle adulthood is best known for the midlife crisis. This is a time of reevaluation that leads to questioning long held beliefs and values. The midlife crisis may also result in a person divorcing his or her spouse, changing jobs, or moving from the city to the suburbs.

Typically beginning in the early or mid 40s, the crisis often occurs in response to a sense of mortality, as middle age persons realise that their youth is limited and that they have not accomplished all of their desired goals in life. Of course, not everyone experiences stress or upset during middle age, instead they may simply undergo a midlife transition, or change, rather than going through the emotional upheaval of a midlife crisis.

Other middle age adults prefer to reframe their experience by thinking of themselves as being in the prime of their lives rather than in their declining years.

The field of life-span development seems to be moving away from a normative crisis model to a timing of events model, so as to explain such events as the midlife transition and the midlife crisis. The former model describes psychosocial tasks as occurring in a definite age related sequence, while the latter describes tasks as occurring in response to particular life events and their timing. In other words, whereas the normative crisis model defines the midlife transition as occurring exactly between ages 40 and 45, the timing of events model defines it as occurring when the persons begin the process of questioning their own life desires, values, goals, and accomplishments.

Later adulthood or the period of old age begins at the age of sixty. During this stage most individuals lose their jobs because they retire from active service. They begin to fear about their physical and psychological health. In our society, the elderly are typically perceived as not so active, deteriorating intellectually. They tend to become narrow minded and seem to attach significance to religion. Many of the old people lose their spouses and suffer from emotional insecurity. However, this may not be true of everybody. Many people at the age of sixty or above remain very healthy and active in life. The life style including exercise, diet, and regular health check up helps people to enjoy meaningful and active life.

Involvement in grand parenting helps elderly satisfy many of their personal and emotional needs. Grandparents can serve as important role models. Old people find these roles emotionally self fulfilling and tend to derive self satisfaction through achievement of their grand children.

Successful ageing occurs when elders have developed many ways to minimize losses and maximise gains.

How and why does a change occur during our adult years? Is it purely the result of biological processes, alteration in our bodies and brains as we grow older? Certainly,

such changes must play an important role, but are they the entire story? Let's discuss these important questions according to psychologist's stage theories or contextual approach.

3.2.1 Stage Theories Versus the Contextual Approach

Stage Theories: Stage theories suggest that all human beings, no matter where or when they live, move through an orderly progression of stages in their development. The individual grows in a systematic process. According to Eric Erikson's eight stages of life, development proceeds through a series of distinct stages, each defined by a specific crisis. These crisis, in return results from the fact that as an individual grows older, they confront new combinations of biological drives and societal demands. The biological drives reflect the expectations and requirements of society for people at different ages.

During adulthood, every individual passes through three major crises. The first of these is the crises of integrity versus isolation. During late adolescence and early adulthood, individual must develop the ability to form deep, intimate relationships with others. This does not simply mean sexual intimacy, rather, it involves the ability to form strong emotional attachment to others. In other words, the first crisis of adult life centers in the capacity to love, to care deeply and consistently with others. People who fail to resolve it successfully will live in isolation, unable to form truly intimate, lasting relationships.

Erikson labeled the second crisis of adult life, that is the crisis of generativity versus absorption. The need for individuals to overcome selfish, self-centered concerns and to take an active interest in helping and guiding the next generation. For parents, such activities are focused on their children. After children have themselves grown up into adults, however, the tendency towards the generativity may involve serving as mentor or guide for members of younger generation, helping them in their careers and lives. People who do not become parents can express generativity by providing help and guidance to young people such as students, younger co-workers, nieces and nephews, and so on. Individuals who successfully resolve this crisis become absorbed in their own lives and gradually cut themselves off from an important source of growth and satisfaction.

Erikson termed the final crisis of adult development as integrity versus despair. Individuals in this stage reach the final decades of their life and look back and analyse themselves with questions like "Did my life have any meaning?" "Did my being here really matter?" If the individual is able to answer "yes" for the questions, and to feel that they have reached many of their goals, they attain a sense of integrity. If, instead, they find their lives to be lacking on such dimensions, they may experience intense feelings of despair. Successful resolution of this final crisis can have important effects on how individuals come to terms with their own mortality, the inevitable fact of death, and on their psychological and physical health during the final years.

According to Erikson and others who view adult development in terms of discrete phases or stages, development during human adult years follows an orderly plan, reflecting the fact that at different times in people's lives, everyone experiences the same problems, events, challenges, or as mentioned crises. The way in which an individual deals with each of these turning points determines the course and nature of people's lives from that point on.

Contextual Approach: Contextual theories of development take careful account of many of the differences that exist in one's life and situations. The context and situation of each individual varies a great deal and these in fact account for the individuals to experience the crises in their life differently.

Contextual theories of development hold that it is the context or environment under which a child grows, that is more important than inbuilt mechanisms. These theorists believe that infants and children develop and grow according to the environmental and contextual influences they are exposed to and that these contextual factors are what makes them fully functioning adults or disordered adults. Biological influences are seen as secondary if not completely ignored.

Two of the most important contextual theories were put forward by American psychologist Urie Bronfenbrenner and Lev Vygotsky. According to Bronfenbrenner's theory development is influenced by experiences arising from broader social and cultural systems as well as a child's immediate surroundings. Ecological Systems Theory, also called "Development in Context" or "Human Ecology" theory, specifies four types of nested environmental systems, with bi-directional influences within and between the systems.

This ecological theory of Bronfenbrenner presents the sociocultural view of development which focuses on the changing relations between individuals and the environments in which they live. It consists of five environmental systems ranging from the individual's direct interactions with social agents to the broad-based inputs of culture. The five systems in Bronfenbrenner's ecological theory are the microsystem, mesosystem, exosystem, macrosystem, and chronosystem.

The microsystem in ecological theory is the setting in which an individual lives (Bronfenbrenner 1979). This context includes the person's family, peers, school, neighbourhood, etc. is the immediate environment in which a person is operating. The individual directly interacts with this environment and the latter has a direct impact on a child's biological and psychological development. The key concept is the "direct contact" between the child and the niche. The mesosystem in ecological theory involves linkages between Microsystems. Behaviourists like John Watson and B.F. Skinner defined environment as "any and all external focuses that shape the individual's environment". While environment is extremely important, there are others who are of the view that the individual in addition has an important role to play.

That is, it is not just that he/she gets influenced by environment, but the developing individual is not all passive but actively influences also the environment in which he/she grows up.

Self Assessment Questions

1) Delineate the Characteristic features of development during early adulthood.

.....

.....

.....

2) What are the important features of development during midyears and old age?

.....

.....

.....

3) Describe the stage theory of development.

.....

4) How does stage theory differ from contextual theory?

3.3 PSYCHOSOCIAL CHANGES DURING EARLY ADULTHOOD

Early adulthood is the stage of our life between the ages of about 20-40 years old, who are typically vibrant, active and healthy, and are focused on friendship, romance, child bearing and careers. It is the first stage of adulthood in which the body physically changes and is one of the hardest times in our lives after teenage years. One has to deal with so much in this time and it seems to be the time for self search as well as preparation for the future coming years of old age.

During this time in one's life, people find themselves with a new sense of independence and for the first time in life they really feel free. However, along with that comes a lot of added personal responsibility to both individuals and others and the persons really start learning more about themselves as well as others through social interaction.

3.3.1 Eric Erikson's Theory

According to Erikson, the socialisation process consists of eight phases – the “eight stages of man.” His eight stages of man were formulated, not through experimental work, but through wide - ranging experience in psychotherapy, including extensive experience with children and adolescents from low - as well as upper - and middle - social classes. Each stage is regarded by Erikson as a “psychosocial crisis,” which arises and demands resolution before the next stage can be satisfactorily negotiated. These stages are conceived in an almost architectural sense: satisfactory learning and resolution of each crisis is necessary if the child is to manage the next and subsequent ones satisfactorily. It is like the foundation of a house which is essential to the first floor, which in turn must be structurally sound to support the second floor as it gets built up. Some of the important crises of the adulthood include the following:

Intimacy vs. Isolation

Intimacy requires that an independent persons give up some of their independence and redefine their identity to include the interests of another person or others in their lives. The adult life is a conflict of intimacy vs. independence, and includes differing needs for connection, fears of abandonment or being overwhelmed, and it's a challenging work in progress.

People who have achieved intimacy are cooperative, tolerant, and accepting of differences. They can accept times of aloneness without fear of loneliness. If there is too great a sense of isolation, there will be fears of forming close ties, due to fears of loss of identity or freedom.

Such people are more competitive than cooperative. They get easily threatened if any person gets too close, and not accepting of another's differences. If there is successful resolution of this conflict, a person can go on to develop generativity, which means

caring for the next generation and helping to improve society. In women, child bearing usually occurs in the 20s and 30s, while contributions to society may occur later. As children come into the picture, values and focus will shift with those demands.

3.3.2 Levinson's Seasons of Life Theory

Levinson sought to find a common path of change in adulthood. He believed that there were stages with tasks inherent to each one. He was of the view that each stage began with a transition, lasting about 5 years. Between transitions there are periods of 5 – 7 years that are stable, during which a person builds a life structure.

Life structure is the underlying design of a person's life, which involves relationships with significant others and occupations. This structure is designed to harmonize inner and outer demands to enhance quality of life. Early adulthood is the time of greatest energy, contradiction and stress. It is also a time of intense satisfaction, as a person charts his/her own course in love, sexuality, family, occupation, setting life goals, etc.

Dreams and mentors: In Levinson's theory, during the early adult transition (age 17 – 22) most people construct a dream, an image of themselves in the adult world that will guide their decision making. The more specific the dream, the more motivating it is. Men's dreams are said to be more individualistic and often entail success in business and career. On the other hand if they include women, their dreams are invariably related to their being supporters of their goals.

Age-30 transition serves as a time to reevaluate their life structure. If the person is still single, she/he will begin looking for a partner. Women who had immersed in marriage and child-bearing may begin to assert more individualistic goals. This period can be a real crisis if neither relationships nor occupation is successful.

Settling down for Men means focusing on certain relationships and aspirations, and leaving others behind. They try to establish a niche in society consistent with their values: family, wealth, power, achievement.

Continued instability for Women occurs as women often get side-tracked from a professional focus by child-bearing and family responsibilities. Most women don't attain the stability that men achieve in the early 30s until middle age.

The Social clock is the age-graded expectations that we hold for life events, such as first job, getting married, having children, buying a house, retirement. Women who followed a feminine social clock (marriage and child bearing in the 20s) are considered to be responsible, self-controlled, tolerant, and caring, but do seem to feel their self-esteem decline, and are said to feel more vulnerable as they aged.

Women who followed a masculine social clock (early career development) became more dominant, sociable, independent, and intellectually effective. Women who had not followed a social clock are said to be suffering from self-doubt, feelings of incompetence, and loneliness.

Close relationships require finding a partner, building emotional bonds, and learning how to engage in true intimacy with another person.

Romantic Love entails finding a partner to share one's life and dreams with. It enhances self-concept and well-being.

Selecting a mate usually means finding someone of similar background, age, ethnicity, socio-economic status and religion, in places where people like that congregate. It requires some physical proximity to develop a meaningful relationship.

Components of love: The triangular theory of love (Sternberg) suggests love has 3 components: intimacy, passion, and commitment. Intimacy has to do with emotions of tenderness, warmth, concern for others, desire for partner to reciprocate. Passion is the sexual component, as well as romance, which is the physical arousal component.

Passionate love is the stuff of the beginning of a relationship – the courting, sexual attraction. It declines as the partner becomes more known, less idealised. Few long-term relationships maintain this level of attraction.

Companionate love is formed with intimacy and commitment, as partners develop warm, trusting affection and offer caregiving. Solid long-term relationships involve both types of love at different stages. It requires this glue to hold a couple together as the newness of a relationship wears off. Commitment determines if a relationship will survive. Communication of commitment requires warmth, forgiveness, sensitivity, acceptance, and respect.

3.3.3 Attachment Patterns and Romantic Relationships

Early attachment patterns predict the quality of later intimate relationships. That early attachment bond sets up an internal working model, or expectations about love figures. It also relates to quality of parenting and attachments formed in those relationships. The attachment is itself of various types which are discussed below:

- i) Secure attachment – those with secure attachments to a caregiver viewed themselves as likable, open to others, comfortable with intimacy, with few fears of abandonment or intimacy. They describe their love relationships as trusting, happy, and the partner as a friend. They were willing to turn to the partner for comfort, and they described satisfying sexual behaviour.

Avoidant attachment – those with an avoidant attachment history (demanding, disrespectful, critical parents) had internal models heavy on independence, mistrusting of partners, and anxious about people getting too close. They believe others dislike them and true love is hard to find or doesn't last. Their relationships are characterised by jealousy, emotional distance, little enjoyment of physical contact. They may become workaholics or engage in affairs to prove their theory that love can't be counted on.

- ii) Resistant attachment – this includes parents who were unpredictable or unfair. These people set up intense relationships characterised by fears of abandonment and smothering of the partner. They experienced extreme highs and lows in a relationship. They have poor boundaries with others, disclosing inappropriately to others too early in the relationship.

Characteristics of the partner also affect romantic relationships. Those partners who feel internal security about themselves fostered security in their partner. So a healthy relationship can help a person from a troubled background overcome some of the deficits of their background.

Friendships are usually similar in background, age, interests and needs. Friends offer affirmation and acceptance, support during difficulty. Sharing deep feelings and needs may be more open in a friendship than a marriage, especially for women.

Same-sex friendships are more intimate for women than men. Women enjoy just talking, while men choose to do some activity together, especially sports. Unfortunately men feel competitive with other men, so they describe barriers to deep friendships with other men, in the form of resistance to revealing any vulnerabilities or needs unmet.

Other-sex friendships occur less often and don't last as long as same-sex friendships. Men and women disclose more to women, but women can learn important things about male motivations and taking a more objective stance from a male friend.

Siblings as friends – especially sisters become companions in adulthood. Rivalries from the past subside as sibs develop a different type of supportive relationship. Close sib relationships predict mental health.

Self Assessment Questions

- 1) According to Erikson's theory indicate the conflict cum crisis that takes place during adulthood.

.....

.....

.....

.....

- 2) Put forward Levinson's theory and its features in adult development.

.....

.....

.....

.....

- 3) What is meant by social clock? How is it important for development in adulthood?

.....

.....

.....

.....

- 4) Describe attachment patterns and romantic relationships.

.....

.....

.....

.....

3.4 THE FAMILY LIFE CYCLE

This is a sequence of phases in the development of most families. Early adulthood, people live on their own, then marry and bear children. In middle age children leave home, parenting responsibilities diminish and people spend more time and money on themselves if they don't have to care for an elderly parent, finally retiring, getting older, and loss of a spouse.

Leaving home happens more often at earlier ages now than in the past. People leave for school, military, and for jobs, so they leave at different ages. Youth in chaotic and disturbing homes leave home earlier to escape the tension. Most leave home to experience

Adulthood and Ageing

their independence, even though that may mean living with a number of roommates to be able to afford it. If there are financial setbacks, however, most people feel they can return home if they have to.

Joining of families in marriage – people are waiting longer to marry today: ages 25 (M) and 27 (W). Marriage represents connection between 2 family systems, with all the traditions and expectations inherent.

Marital roles encompass meals, time together and apart, leisure time decisions, sexual needs, financial decisions. Some of these things are not as emotionally charged as others, but the partners rarely know which topics are potential explosions until they face them. Without good communication and negotiation skills, the openness of the marriage will be compromised.

Traditional marriages involve a clear division of labour between husband and wife. Man's responsibilities include economic provision; woman's responsibilities have to do with making a home and providing for children.

Egalitarian marriages have spouses relating as equals, with power and authority being shared. Both partners try to balance devotion to work with family responsibilities. Better-educated women expect this sort of marriage. Even so, division of labour in the home may not be equal.

Marital satisfaction – Men relate being happier in marriage than women. Being married enhances men's health, due to feelings of attachment, belonging, social support. Women need a certain relationship quality to feel satisfied in a relationship. So women suffer more when the relationship is having problems. Women also suffer under multiple role demands, feel overwhelmed by the needs of all the people in their circle. Women are more willing to work on the relationship through discussion, but men are more willing to withdraw from conflict, leading to frustration in the women.

Parenthood has become an active choice for couples, as birth control is available and effective today. There is less stigmatisation for couples who remain childless. The decision to have children is based on financial circumstances, religious values, health concerns. Women with more traditional identities usually choose to have children. Those with high status, demanding jobs choose less often to have children.

Advantages of having children include warmth and affection, the fun that children offer, learning experiences, desire to pass on values, family name, feelings of accomplishment in raising successful children.

Disadvantages of having children include loss of freedom, burdens financially and in being tied down. The conflict between work responsibilities and family also is cited as a problem.

Transition to parenthood occurs in all areas: loss of sleep, new tasks and responsibilities, less time for the couple, increased expenses. The roles become more traditional, even for egalitarian couples, so this can impose frustration on the couple. Loving, supportive marriages can usually manage the strain and will describe themselves as happy. Troubled marriages seem to become more distressed after a baby. Husband's negativity or out-of-control conflict predicts a drop in mother's satisfaction. The greater the difference in caregiving responsibilities, the greater the decline in marital satisfaction after childbirth. Interventions such as group experiences with other couples can get fathers more involved and enhance the father's appreciation of what caregiving entails, increasing affirmation of mother, and satisfaction.

Career development aids in establishing a satisfying identity- as adults with satisfying work develop skills, sense their accomplishments, make friends and feel more financially independent and secure.

Establishing a career

Men enter their careers earlier, as soon as they finish school, and they stay in the marketplace continuously. Promotion often seems to depend on job commitment and competitiveness in the worker. Very successful men emphasise their jobs over family responsibilities and leisure activities. Also a sense of self-efficacy makes a difference in promotion. Those people with fears of failure will tend to set lower goals for themselves.

Combining work and family

Dual-career marriage are challenging, particularly for women who carry so many role responsibilities- role overload. This links to stress, poorer marital relationships, poorer parenting, and child behaviour problems. It is particularly a problem for people in poorer paying jobs, with fewer options about child care, time off, etc. Career decisions are more flexible for professional people, but moves are difficult, since both careers must be considered. Women are particularly afflicted with overload.

Self Assessment Questions

- 1) Elucidate the family life cycle during adulthood and related factors.

.....

.....

.....

.....

- 2) What are the advantages and disadvantages of having children early?

.....

.....

.....

.....

- 3) What are the transitional aspects involved in parenthood?

.....

.....

.....

.....

- 4) Discuss career development during adulthood.

.....

.....

.....

.....

3.5 PSYCHOSOCIAL CHANGES DURING MIDDLE ADULTHOOD

Eric Erikson's Theory

Erikson stated that the primary psychosocial task of middle adulthood—ages 45 to 65—is to develop generativity, or the desire to expand one's influence and commitment to family, society, and future generations. In other words, the middle adult is concerned with forming and guiding the next generation. The middle adult who fails to develop generativity experiences stagnation, or self-absorption, with its associated self-indulgence and invalidism.

Generativity means reaching out to others in ways that give to and guide the next generation. In early adulthood it occurs as parents train children and develop a career. In midlife this extends beyond the nuclear family to a community or social group. Now people are trying to integrate their goals with the welfare of the larger world. Generativity includes all things people generate that can outlive them and improve society. Parenting is one way, but there are other ways, such as mentoring in the workplace, volunteering, community involvement, creative endeavors. People need to be needed and feel like their lives amount to something eternal.

There are certain social clock imperatives toward generativity, but there is also an optimistic "belief in the species" that we want to be part of. This means finding ways to be part of improving humanity. The alternative to finding a means to generativity is *stagnation*—becoming self-centered and narcissistic. These people place their own comfort/ security above challenges that include other people. There is a detachment even from their own children, a self-centered focus on what they can get from others, not what they can give, losing interest in being productive at work or developing their talents. Generative people are better adjusted, low in anxiety and depression and high in self-acceptance and life satisfaction. They are more open to others' differences in point of view, have leadership qualities, care about the welfare of others, and care more about their work than financial gain. Fatherhood seems to enhance generativity in men more than women.

Levinson's Seasons of life – middle adulthood begins with a transition (40-45), followed by a life structure (45-50). This structure is re-evaluated (50-55) and ends in a culminating life structure (55-60).

Midlife Transition occurs around age 40, when people evaluate their success in meeting their adult goals. They are realising there is more time behind them than ahead of them. In response to the valuation of time, they often make big changes in their lives- family, occupation. They may turn inward, focusing on their own needs, instead of allowing themselves to be distracted by the people around them. They seem to re-evaluate everything.

3.5.1 Four Developmental Tasks of Middle Adulthood

Following are the developmental tasks of this stage of development:

- i) Young-Old- seeking new ways of being young and old- giving up some youthful qualities that no longer seem appropriate, and transforming others, finding positive meaning in changes.
- ii) Destruction-Creation. They re-evaluate past hurtful acts- there may be attempts to apologise and make amends, or general attempts to be kinder, more creative, other-focused.

- iii) **Masculinity- Femininity.** Middle-aged people must find a way to recognise and integrate the masculine and feminine aspects of their personality- men become more empathic/ caring; women becoming more autonomous/ assertive
- iv) **Engagement- Separateness.** Middle-aged people are trying to find a better balance between engagement with the outside world and their interior needs. Men often pull back from occupational ambition and achievement focus; women may shift their interests from family to job or community and accomplishment.

Modifying the Life Structure

Gender similarities and differences are seen as people try to find a balance between youth and age. They may face life-threatening illnesses, or have to cope with ageing parents' needs. Women often fear the ageing process, as our society places so much emphasis on women's youth and looks as their value. Women will tend to perceive themselves as younger than they are – that gap increases with age. The more people integrate their masculine and feminine characteristics, the more androgynous they become, which is an adaptive approach to life.

Life Structure in Social Context is enabled through supports in the environment- poverty, unemployment and lack of personal value subverts this process. Even high-powered careers and great financial success can sabotage self-development, as the focus is on material concerns, not self development.

Midlife Crisis was cited by Levinson as people moved to middle adulthood. This is the idea that adults get to a certain point and question their life choices, resulting in a restructuring of the personality. The changes seen were slow and steady. Changes for men may occur around the early forties, but for women may occur in the late 40s and 50s, as they are freer from child responsibilities.

Stage vs. Life Events approach

There is controversy about whether midlife is actually a stage of development, like Erikson described. Many theorists just seen midlife transitions as adaptations to life events- children moving out or having to move back in, parents ageing concerns, retirement. There certainly is no specific age when changes will occur. Most midlife people describe troubling moments that prompt new goals and internal changes.

Stability and Change in Self-Concept and Personality

Possible Selves are all the ideas a person has about what one can become or what one fears becoming. Possible selves generated in the 20s are varied, positive and idealistic. As people age, possible selves become more realistic, fewer in number and more modest, related to competence in the areas already selected. The future no longer seems to hold endless opportunities, so people adjust to cope.

Self-Acceptance, Autonomy, and Environmental Mastery .

People become more introspective as they enter the second half of life. They have often made choices to change their lifestyle to suit their needs.

Coping strategies. These include finding the “silver lining” in a difficult situation, planning better ways to handle problems, evaluate alternatives to manage situations, and use humor to express themselves more effectively.

Gender Identity shifts in response to shifting proportions of sex hormones

Women adopt more masculine traits of assertiveness and self-confidence, and men

often become more sensitive, caring, and considerate. People become more androgynous. Men may turn to their relationships as they see they have fewer opportunities to develop influence at work. Women may have taken steps out of a bad marriage and have chosen to be more autonomous and assertive to survive.

3.5.2 Individual Differences in Personality Traits

Some people maintain consistent traits over the lifetime, while others adjust in some ways in response to life.

Relationships at Midlife

This period of the family life cycle is called “launching children and moving on.” In the past it was known as the “empty nest,” but it is no longer seen in such a negative light, even for women. This period may last as long as 20 years before retirement. It also relates to establishing different relationships with children and finding new relationships with in-laws and grandchildren. They also must cope with elderly parents and their needs.

Marriage and Divorce

Households at this stage are well off economically compared to other age groups. Adults between 45 and 54 have the highest annual income. This can allow for expansion of opportunities to learn, travel, etc. If the marital relationship is shaky, many people choose this time to divorce and start over. At midlife, divorce seems to be more manageable emotionally.

Feminisation of poverty

This is a trend in which women who support themselves or their families have become the majority of the adult poverty population, regardless of age and ethnic group.

Causes of divorce

Women who cite poor communication, husband’s substance abuse, husband’s physical or verbal abuse, or their desire for autonomy will adjust better, since it indicates a remnant of self-esteem in spite of the failure. Women who do survive divorce successfully tend to be more tolerant, comfortable with uncertainty, nonconforming, and self-reliant.

3.5.3 Changing Parent-child Relationships

This adjustment is more positive when parents have interesting activities of their own, beyond parenting and focus on children. Parents who relinquish authority over their adult children will have more positive relationships with them after they move out. The authoritative parenting style links to better contact after the child leaves home, and better life satisfaction for the parents.

Grandparenthood is such a stage in this age, as it is a relationship with fewer responsibilities and mostly fun. Meanings of Grandparenthood are more significant than people think until they face that transition. The gratifications include:

- Valued elder
- Immortality through descendants
- Reinvolvement with personal past
- Indulgence

Grandparent-Grandchild relationships are somewhat dependent on the age of the child. As the child grows older, the grandparents shift from play to warmth, support, information and advice-giving. The closer the families live geographically, the better chance the children can relate more closely to the grandparents, especially the grandma.

Siblings report declining contact in midlife, but this increases as one or more experience life events. Families gather for weddings, and support one another when a child divorces, or has a baby. Siblings reconnect as their children leave home and they rediscover it's fun to do things together. They often reconnect in response to the parents' illnesses or needs. Sister relationships are usually closer than brother relationships. If only one sibling holds the responsibility for elder care, there can be enormous resentment build up against the other sibs.

Friendships still cleave across genders – men are more likely to bond with men, and women with women. Women seem to have more close friends and offer and get more emotional support than men report. Numbers of friends decline with age, since people get more selective about friendships. If it is a close friendship, though, people will try to maintain it with care. Friendships are sources of emotional support, pleasure and enhance well-being.

Career Development

Job Training is less available to older workers, but if a person wants to upgrade his/her job, training is important. Unfortunately older workers have less supportive supervisors who tend to believe the ageing stereotypes and expect less of older workers.

Gender and Ethnicity

The Glass Ceiling is the unspoken, invisible barrier to advancement to women and ethnic minorities. Women managers are just as effective as male managers – they tend to be more inspiring and considerate than male managers. The current emphasis on team building is perfect for female skills in consensus-building.

Career Change at Midlife – usually they entail leaving one line of work for a related one. Some people find another line of work to find more stimulating work, others to more relaxing, less rigid or demanding work. Drastic job shifts usually signal personal crisis.

Unemployment has been a serious problem in the past 2 years as the technology industry cratered and many jobs went with it. Highly trained and well-paid workers were suddenly on unemployment lines. Middle-aged workers are more affected by unemployment, as they recognise they won't be the most employable, or they won't command the same salary they had before. This can seriously affect a worker's sense of self worth at this point.

Planning for Retirement

This is not always adequate, as people tend to believe they will work as long as they want, but illness or family crisis will sometimes short-circuit this plan. The other aspect of planning has to do with how one wants to spend their time. If people don't develop hobbies, community interests, etc., boredom can trigger depression and hopelessness. Even the idea of relocation requires much thought, since moving to be with children may impact that relationship very negatively.

Self Assessment Questions

1) Differentiate between generativity and stagnation.

.....

.....

.....

.....

2) Discuss four developmental tasks of middle adulthood.

.....

.....

.....

.....

3) Discuss an individual's relation with siblings and friends.

.....

.....

.....

.....

4) Discuss psychosocial changes in mid adulthood.

.....

.....

.....

.....

5) What is the importance of Levinson's seasons of life?

.....

.....

.....

.....

6) Put forward the developmental tasks of mid adulthood.

.....

.....

.....

.....

7) What is meant by modifying life structure?

.....

.....

.....

.....

3.6 PSYCHOSOCIAL CHANGES DURING OLD AGE

The social world of older adults is varied. In general, older adults place a high value on spending time with friends, sometimes more so than time with family. This might be because of life events wherein family members are not always nearby or readily available. Also, many elders prefer not to interfere with or be a burden to their extended family. They strive to be independent and enjoy life with members of their own cohort. Within a marriage, couples may have trouble adjusting to retirement. This is most true for more traditional marriages. However, evidence suggests that married persons tend to be happier in late adulthood than single persons, though those who have never married often cope the best with feelings of loneliness in late life.

Erikson's Theory

Ego Integrity vs. Despair is the final stage of life. This involves coming to terms with one's life. If there is a sense of integrity, people feel whole, complete, and satisfied with their life choices and achievements. They have accepted the setbacks and disappointments and celebrated the successes and found a way to meaning within all these life events. Everything gets put into a perspective which allows a certain contentment with life. Increased age is associated with greater maturity and well-being. There is even a peace about one's mortality, even as close to the end as these people are. Despair, on the other hand occurs when seniors feel they have made wrong decisions, but life is too short to remedy any life directions. They display bitterness, defeat and anxiety about death, a hopelessness.

Peck's Theory: Three Tasks of Ego Integrity are involved in finding integrity:

Ego differentiation vs. work-role preoccupation. This task comes out of retirement, as people who have been invested in careers find other ways to self-worth. They must find another role to invest in and find meaning.

Body transcendence vs. body preoccupation. This task requires finding a way to transcend physical limitations, disabilities, loss of youth and beauty, to find value in cognitive, social strengths and relationships.

Ego transcendence vs. ego preoccupation. This task involves finding a constructive way of facing the reality of death. Elders must find a future beyond their own mortality, through giving back to a younger generation.

Labouvie-Vief's Theory

Emotional Expertise. Early adulthood is all about pragmatic choices- finding ways to solve real-world problems, at work as well as within relationships. Elders are becoming more in touch with their feelings and must use those feelings to reflect on their life experiences. This emotional sensitivity allows elders to detach from experiences in order to choose better how to respond. Younger people are more impulsively emotional in their coping and problem-solving. Elders are better at emotional self-regulation.

Reminiscence and Life Review

Reminiscence is telling stories about people and events from one's past, and reporting thoughts and feelings. Life review is reminiscence in which the person reflects on past experiences, considering their meaning with the goal of achieving greater self-understanding. Middle age was also assessed as satisfying, with childhood and adolescence ranked as less satisfying.

3.6.1 Stability and Change in Self-Concept and Personality

Secure and Multifaceted Self-Concept- after a lifetime of self-knowledge, people feel more secure about whom they are, and their self-concepts become more complex and multi-faceted.

Agreeableness, Sociability, and Acceptance of Change – there are 3 shifts in personality at this point: a more flexible and optimist approach to life is present.

Agreeableness – generosity, acquiescence, and good-naturedness are higher for many people at this point.

Sociability drops to some extent, as people become more selective about relationships and significant people die or move away.

Acceptance of change seems to link to well-being. They develop a capacity to accept life's vagaries, and they are resilient in the face of adversity.

Spirituality and Religiosity – their sense of spirituality encompasses their lives more meaningfully. Often there develops a sense of truth and beauty in art, nature, and relationships. Religion gives people rituals that stabilise life and give meaning to the life struggle. Spirituality advances to a higher level in late life- to a more reflective approach that is more at ease with the unknowable aspects of life.

Individual differences in Psychological Well-Being- Control Vs Dependency

Dependency-support script is a script in which dependent behaviours are attended to immediately, reinforcing the weaker member in her dependency.

Independence-ignore script is a script where independent behaviours are ignored, also reinforcing dependency in the weaker member. Unfortunately, being dependent is not a happy state, so the helper is often resented, even though the elder may recognise s/he needs the help. These negative feelings can foster depression. Context makes a difference however, since the more lovingly the help is offered, the easier it is to accept without regret. Elders will need help, but we can offer it without expressing disgust or impatience for their needs.

Elder Suicide is not always evident. Sometimes elders quit eating, taking care of emotional or physical problems, refusing to take meds, refusing relationships that could be encourageing.

Health is a strong predictor of well-being in late adulthood. When people face illness or chronic disabilities, they feel a loss of personal control. Not only does helplessness increase, but social isolation increases, too. Then as mental health declines, it affects physical health, as people eat more poorly, get out less, distract themselves less from their ailments.

Negative Life Changes occur more often in late adulthood- loss of friends, spouses, poor health issues, financial strain and greater dependency. This issues hit women more often, but they still report that they have people who depend on them emotionally, so they retain some of their former identity, even though many relationships often feel strained, due to the women's lower ability to care for others.

Social Support and Social Interaction – social support reduces stress, so it promotes health and well-being, and increases the odds of living longer. If elders require much assistance from others, though, they often feel distressed that they can no longer reciprocate.

3.6.2 Relationships in Late Adulthood

Social convoy is a cluster of family members and friends who provide safety and support. Some bonds become closer with age, others more distant, a few are gained, and some drift away. Elders do try to maintain social networks of family and friends to preserve security and life continuity.

Marriage – marital satisfaction rises from middle to late adulthood if perceptions of fairness in the relationship increase. If couples engage in joint leisure activities and enjoy more positive communication, their relationships become more satisfying.

Siblings- Bonds with sisters are generally closer than those with brothers. Siblings enjoy reminiscing as they enter later adulthood. This allows them to feel a family continuity and harmony, as well as begin to put their lives into a perspective as they naturally do a life review.

Friendships function to offer intimacy and companionship, acceptance, a link to the larger community, and protection from the toll of loss- physical and emotional. Women are more likely to have both intimate friends and secondary friends- people who are acquaintances they do some activities with occasionally.

3.6.3 Retirement and Leisure

Decision to retire depends on affordability, health status, opportunities to pursue meaningful activities, early retirement benefits, gender and ethnicity. Women retire earlier than most men because of family demands.

Adjustment to Retirement is affected by health status, financial stability, sense of personal control over life events, including the retirement decision, characteristics of the work they did, satisfaction derived from work, social support and marital happiness.

Leisure Activities engaged in relate to physical and mental health, but they also relate to reduced mortality. It is best to develop hobbies and interests and volunteer activities before retirement that can be invested in more seriously after retirement.

Successful ageing occurs when elders have developed many ways to minimize losses and maximise gains. Social contexts can foster successful ageing. These are such things as well-funded social security plans, good health care, safe housing that adjusts to changes in elders' needs, social services, opportunities for lifelong learning. Better in-home help, adapted housing and sensitive nursing home care could make a difference in ageing, too.

Self Assessment Questions

- 1) Differentiate between ego integrity versus despair.

.....

.....

.....

- 2) Discuss reminiscence and life review.

.....

.....

.....

3) Explain how is spirituality and religion important during the late adulthood.

.....

.....

.....

3.7 LET US SUM UP

During the period of young adulthood one sees himself or herself as an autonomous and independent adult. In this period the individual becomes financially less dependent on the parental family. A major developmental task during this period is the choice of career. Young men and women tend to settle down in a career of their choice. In addition a young adult tries to settle down and start the family life. They are also concerned about various social issues and forming close relationships with one's professional peers and members of community. The duties of a person demand two fold responsibilities which are towards oneself as well as the society.

Perhaps middle adulthood is best known for its infamous midlife crisis: a time of reevaluation that leads to questioning long-held beliefs and values. The midlife crisis may also result in a person divorcing his or her spouse, changing jobs, or moving from the city to the suburbs. Typically beginning in the early- or mid-40s, the crisis often occurs in response to a sense of mortality, as middle adults realise that their youth is limited and that they have not accomplished all of their desired goals in life. Of course, not everyone experiences stress or upset during middle age; instead they may simply undergo a midlife transition, or change, rather than the emotional upheaval of a midlife crisis. Other middle adults prefer to reframe their experience by thinking of themselves as being in the prime of their lives rather than in their declining years.

During the male midlife crisis, men may try to reassert their masculinity by engaging in more youthful male behaviours, such as dressing in trendy clothes, taking up activities like scuba diving, motorcycling, or skydiving.

During the female midlife crisis, women may try to reassert their femininity by dressing in youthful styles, having cosmetic surgery, or becoming more socially active. Some middle adult women try to look as young as their young adult children by dyeing their hair and wearing more youthful clothing. Such actions may be a response to feelings of isolation, loneliness, inferiority, uselessness, nonassertion, or unattractiveness.

The field of life-span development seems to be moving away from a normative-crisis model to a timing-of-events model to explain such events as the midlife transition and the midlife crisis. The former model describes psychosocial tasks as occurring in a definite age-related sequence, while the latter describes tasks as occurring in response to particular life events and their timing. In other words, whereas the normative-crisis model defines the midlife transition as occurring exactly between ages 40 and 45, the timing-of-events model defines it as occurring when the person begins the process of questioning life desires, values, goals, and accomplishments.

Later adulthood or the period of old age begins at the age of sixty. During this stage most individuals lose their jobs because they retire from active service. They begin to fear about their physical and psychological health. In our society, the elderly are typically perceived as not so active, deteriorating intellectually, narrow-minded and attaching significance to religion. Many of the old people lose their spouses and suffer from emotional insecurity. However, this may not be true of everybody. Many people at the

age of sixty or above remain very healthy and active in life. The life style including exercise, diet, and regular health check up helps people to enjoy meaningful and active life.

Involvement in grand parenting helps elderly satisfy many of their personal and emotional needs. Grandparents can serve as important role models. Old people find these roles emotionally self-fulfilling and tend to derive self-satisfaction through achievement of their grand children.

3.8 UNIT END QUESTIONS

- 1) Discuss stage versus life events approach.
- 2) What are the differences in individual personality traits?
- 3) Discuss the dynamics of relationship in middle age.
- 4) Discuss the importance and characteristics of grand parenthood.
- 5) What are the psychosocial changes that occur in old age?
- 6) What importance has retirement in late adulthood?

3.9 SUGGESTED READINGS

Agich, G (2009). *Dependence and Autonomy in Old Age*. Cambridge university Press, Cleveland

Sigelman, Carol K. & Rider Elizabeth A. (2009). *Lifespan Human Development*. Wardworth, NY

UNIT 4 CHALLENGES AND ISSUES IN AGEING PROCESS

Structure

- 4.0 Introduction
- 4.1 Objectives
- 4.2 Ageing Process
 - 4.2.1 Ageing Process in Women
 - 4.2.2 Ageing Process in Men
- 4.3 Ageing Issues and Challenges in Early Adulthood
- 4.4 Ageing Issues and Challenges in Middle Adulthood
- 4.5 Ageing Issues and Challenges in Late Adulthood
- 4.6 Let Us Sum Up
- 4.7 Unit End Questions
- 4.8 Suggested Readings
- 4.9 Answer to the Self Check Questions

4.0 INTRODUCTION

As we age, our bodies change in many ways that affect the function of both individual cells and organ systems. These changes occur little by little and progress inevitably over time. However, the rate of this progression can vary differently for different persons. The ageing process brings with it many challenges, as for instance not being physically as strong as in the earlier years, facing different types of responsibilities, crisis and conflicts. For tackling these challenges one must have varying coping abilities which itself is a challenge. In this unit we will be dealing with the type of challenges one faces as one grows old and the varying coping strategies that they need to have to overcome the same.

4.1 OBJECTIVES

After going through this unit, you will be able to:

- define and describe the ageing process in men and women;
- explain the ageing issues and challenges in early adulthood;
- analyse the ageing issues and challenges in middle adulthood; and
- explain the ageing issues and challenges in late adulthood.

4.2 AGEING PROCESS

Ageing or aging is a process that accumulates changes in organisms or objects over time. Human ageing process involves multidimensional changes on physical, psychological, cultural and social levels.

As soon as an individual is born, their body begins to age. This process continues throughout our life. Ageing is not simply about old age. It is the lifelong process by which we define the social, mental, and biological stages in our lives.

A newborn baby is developing new cells and shedding dead cells daily. The “peach fuzz” hair is replaced with new hair that is stronger and more colored. The skin begins to adapt to the “out-of-umbilical-fluid” environment.

Bodies continue to grow in the toddler years into puberty and adolescence. Constant changes take place in the body until the height, determined by genetics, is reached. Then the body starts to spread a little here and there, taking a new shape of body style in the adult years.

Changes in our body are sometimes described as deterioration, such as gray hair, wrinkles, loss of hearing, the need for bifocals. These are just normal changes as the body progresses. A person over the age of 50 can still be vital and healthy. Hardening of the arteries, bone density loss, and slowing metabolism are more signs of the normal ageing process.

Ageing retardation could stretch out our entire life cycle like a rubber band, extending the time we spend in infancy, childhood, adolescence, prime, and senior years. Yet there is always the risk of a serious rift between the maturity of the body/mind and the expectations and requirements of life.

The ageing process in humans is a complex biochemical process which includes all the changes taking place socially, psychologically and physically. The process of ageing in the human body is inevitable and there are many signs of ageing occurring both within and outside the human body. Ageing, also known as senescence, is a process that every human being goes through, but the ageing process in women slightly differs from the ageing process in men. As we age, there are a number of changes taking place in the various systems of the human body, which may, at times cause age-related problems and disorders.

The intensity of problems and challenges depends on a combination of both genetic and environmental factors. Again recognising that every individual has his or her own unique genetic makeup and environment, which interact with each other, helps us understand why the ageing process can occur at such different rates in different people. Overall, genetic factors seem to be more powerful than environmental factors in determining the large differences among people in ageing and lifespan.

Ageing or aging is a process that accumulates changes in organisms or objects over time. Human ageing process involves multidimensional changes on physical, psychological, cultural and social levels.

Heredity, diet, exercise, social involvement, and spirituality all play a large part in your physical wellbeing. Eating right and exercising will keep your body healthier and may stave off some of the effects of ageing, or at least slow the ageing process.

Women are naturally obsessed with their looks and their world revolves around their looks and looks only. Ageing is an inevitable natural process and there is no treatment for ageing process. Although, it is true that women face much different challenges than men in ageing process, the key to fight ageing process in women, solely depends upon her perspective about life. If she decides to age gracefully, nothing can deter her from leading a beautiful life.

Ageing, from the male perspective, is frequently associated with loss of physical and mental function and vitality. The implied stigma that comes with ageing often prevents men from dealing with important health issues associated with the process.

During middle adulthood, the two primary long-term relationships characteristic are

Adulthood and Ageing

cohabitation and marriage. Cohabitors are unmarried people living together in a sexual relationship, often state their reason for cohabiting as either a trial for marriage or an alternative to marriage.

Middle adulthood refers to the people who are experiencing changes and development in their central lives. It is basically about the midlife transition or the period of life beyond young adulthood but before the commencement of old age.

Elder care can be thought of as an umbrella of care and services for the frail elderly. These include a broad range of services including: meals and socialisation, personal care, light housekeeping, residential facilities, and adult day care.

The process of ageing in the human body starts at middle age around 45. The process and its effects depend on both, the genetic as well as environmental factors and hence, some of the aspects of the ageing process may differ from person to person. To understand the human ageing process better, let us try and understand the cellular changes that occur along with the ageing process.

Ageing causes some amount of reduction in the rate of human cell multiplication (cellular senescence) and also causes some of the cells to function inappropriately. It also interferes with the growth and development of the body tissues which leads to the development of various immune system related disorders.

Heredity, diet, exercise, social involvement, and spirituality all play a large part in your physical wellbeing. Eating right and exercising will keep one's body healthier and may stave off some of the effects of ageing, or at least slow the ageing process.

4.2.1 Ageing Process in Women

Women are considerably concerned with their looks and their world revolves around their looks and looks only. It's as though physical appearance is the only thing that matters to them in the world. Obviously, when the first few physical signs of ageing start showing up, their world is shattered into bits. Besides, being the more sensitive gender, the emotional and psychological changes that accompany ageing are difficult to cope. Ageing brings about changes on the physical, psychological and social front of a woman's life.

Physical Challenges

Menopause is the word that immediately comes to one's mind when we say ageing process in women. The woman's life is divided into two phases premenopausal and postmenopausal. The hormonal changes in the body cause many ageing problems. The body starts losing out on bone mass and muscle strength. These weakened bones often result in osteoporosis and arthritis, which accompany the woman throughout the rest of her life. The skin becomes sunken and sallow and eventually, wrinkles begin to appear. The immune system is no longer able to produce sufficient anti bodies, thereby making the body susceptible to various illnesses. Most vital organs show diminished performance, which affects the entire health of the woman.

Psychological Challenges

These are to an extent related to physical status of the individual. Menopause is the buzz word here. The hormonal changes during menopause bring about plethora of behavioural changes in a woman. The very fact that they are no longer fertile, is enough to send many women into depression. Emotional insecurity haunts their mind due to the fear that since she is no longer physically attractive, her spouse may not love her. She may become extremely moody and irritated as she may not be able to cope with the

many changes that happen all at once in her life. Lastly, there is this daunting feeling of ageing that she somehow relates with the 'end'. However, some optimistic women may take this as an opportunity to fulfill their unaccomplished dreams and lead a life the way they always wanted to.

Social Challenges

During ageing process in women, their social life entirely depends upon their own attitude towards life and most importantly their health. Some women, due to their poor health or some other reason, may completely shut themselves away from the world. While the other, more outgoing group, may engage themselves in community activities or some hobbies and interests. Most women in this age group are financially settled and have a family that is no longer dependent upon them. Thus, this period poses a golden chance for them to live the life for themselves.

Ageing is an inevitable natural process and there is no treatment for ageing process. Although, it is true that women face much different challenges than men in ageing process, the key to fight ageing process in women, solely depends upon her perspective about life. If she decides to age gracefully, nothing can deter her from leading a beautiful life.

4.2.2 Ageing Process in Men

Ageing, from the male perspective, is frequently associated with loss of physical and mental function and vitality. The implied stigma that comes with ageing often prevents men from dealing with important health issues associated with the process. Ageing process in men has always been related with the decrease of mental and physical functions. The ageing process in men brings physiological changes in the body. Men, in their middle age, do bulge around the middle due to accumulation of a lot of unburned fat and lack of exercises. Ageing process in men does not treat all the men in the same way. The day you notice a grey hair, standing out among the rest of your black hair, you may observe your boss, who is senior in age to you, darting from one place to another, as if he is a 16 year old kid. This may make you wonder, how this chap is managing to stay so fit, at his age.

Whole health

When the ageing process starts, a whole foods diet high in fiber, low in saturated fat, and rich in nutrients is the best health-promoting approach. Eating fresh vegetables and fruits rich in antioxidant nutrients and fiber helps reduce the risk factors for cancer. Consistent moderate exercise promotes cardiovascular health as well as reduces the risk factors for obesity, diabetes, and osteoporosis. Together with an approach to stress management, diet and exercise form the foundation of an overall health plan.

Mental health

Mental health is an important concern for many men, as Alzheimer's Disease and Dementia which are common to occur during this age may afflict the individual. Maintaining mental health and function as we age is a growing concern. Herbal extracts like ginkgo biloba and nutrients like phosphatidyl serine and DHA (docosahexaenoic acid), a component of fish oil can greatly assist in promoting mental health and function.

Standardized ginkgo extracts help increase circulation to the brain and extremities, act as an antioxidant in the brain and retina, and protect nerve cells through a reduction in platelet aggregation. By promoting blood flow to the brain and reducing potential damage to nerve cells, ginkgo supports cognitive function and can help stave off diseases such as Alzheimer's Disease and Senile Dementia.

Adulthood and Ageing

Heart health

The most obvious concern for men as they age is heart health and disease. Cardiovascular disease is still among the most common causes of death among men. Diet and lifestyle play a significant role in the progression of cardiovascular disease and are also central to its treatment. Natural medicines can also play a key role in helping to reduce the risk and complications of heart disease.

High fiber foods and a reduced intake of meats high in fat combined with a program of daily exercise and stress reduction techniques have shown very positive results in even the worst heart disease.

Prostate health

Prostate health is a consideration for men once they reach the age of 40. Over the age of 40, it is estimated that 60 percent of men will have an enlarged prostate (also known as BPH, benign prostatic hyperplasia). As men age, the likelihood that they will develop BPH increases. Although the initial symptoms of prostate enlargement may be considered minimal, and only slightly bothersome, proactive care can greatly reduce the risk for more serious complications.

Standardized extracts of herbs like saw palmetto, nettle, and pygeum are frequently recommended along with pollen extracts. Natural therapies like pollen extracts and saw palmetto can also help reduce the effects of testosterone breakdown products on prostate cells. High levels of dihydrotestosterone (DHT) have been associated with prostate cancer.

Skeletal health

Joint and bone health issues are also common problems for men in which past sports injuries and wear and tear can lead to osteoarthritis. As one ages, our connective tissue is not able to repair itself as efficiently as when we were younger. Additional nutrition is often necessary to promote cartilage healing and prevent further breakdown of joint tissue associated with osteoarthritis.

Although many men do not think about osteoporosis, it, too, is a major concern for men as they age. Although women have bone health risks related to changes in hormone levels, as many as one-sixth of all men will fracture a hip during their lifetime.

The ageing process is a natural one. Ageing, however, does not have to mean loss of function or vitality. In fact, healthful eating habits in combination with focused nutrients and herbs can combine to make the 40-plus years the best of any man's life.

Self Assessment Questions

- 1) Discuss the ageing process in females.

.....

.....

.....

.....

- 2) What are the important factors associated with ageing in males?

.....

3) What are the typical health issues associated with ageing ?

4.3 AGEING ISSUES AND CHALLENGES IN EARLY ADULTHOOD

Early adulthood is the stage of our life between the ages of about 20-40 years old, who are typically vibrant, active and healthy, and are focused on friendship, romance, child bearing and careers. It is the first stage of adulthood in which the body physically changes and is one of the hardest times in our lives after teenage years.

Neither intimacy nor individual development can exist alone. The birth of a child initiates a human being into a life-long process of mutual adaptation between the child, his or her intimate relationship partners and the broader social environment. Intimate interactions and relationships affect adaptations to the changing needs and stresses that evolve with each stage of development throughout one's lifetime. Intimate interactions from early life serve as the basis upon which relationships later in life are formed. Environmental contingencies to which individuals must adapt are rooted in these relationships. In an attempt to adapt to other people's styles of relating, one must adjust his or her own behaviours.

Maturity

Children entering adolescence must begin to adapt to the adult world and its institutions while coming to terms with emerging parts of themselves. They discover themselves as having new emotional and sexual needs. As they make these discoveries, adolescents begin to realise the limitations of their parents. Taking responsibility for aspects of their own character requires distancing from authoritative.

Friendships

Over the course of social development, the role of friends and parents changes significantly. As an adolescent undergoes physical and emotional changes, he or she seeks out relationships that enhance efforts to adapt to new needs and stresses. Adolescents seek to share their thoughts and feelings with those who are experiencing similar changes. Intimate interactions increase between friends during this stage in life because they provide teens with opportunities for self-clarification. Through the formation of co-constructive dialogues between friends, teens can participate together in exploring and constructing selves.

Multiple Selves

During late adolescence, one must first confront the problem of multiple selves. For the first time, an adolescent realises that his or her personality changes from one situation to

the next. This is the stage of life during which one looks to craft a narrative of the self that provides a sense of sameness and continuity. The importance of intimate friendship and romance formed during early adulthood stems from the valuable and adaptive contribution dialogues made with friends during adolescence. Personality differences can be identified by capacities to form intimate relationships characterised by commitment, depth, and partner individuation based on interactions of early life.

Self Assessment Questions

1) Fill in the blanks:

- i) Human ageing process involves _____ changes on physical, psychological, cultural and social levels.
- ii) Eating fresh vegetables and fruits rich in _____ nutrients helps reduce the risk factors for cancer.
- iii) High levels of _____ have been associated with prostate cancer.
- iv) Neither _____ nor individual development can exist alone.
- v) Joint and bone health issues can lead to _____.

2) Answer the following statements with True or False:

- i) Ageing process continues throughout our life.
- ii) Eating right and exercise can keep the ageing process slow.
- iii) The hormonal changes in the body is not concerned with ageing problems.
- iv) Prostate health is a consideration for women once they reach the age of 40.
- v) The ageing process is a natural one.

3) What are the ageing issues and challenges in early adulthood?

.....

.....

.....

.....

4.4 AGEING ISSUES AND CHALLENGES IN MIDDLE ADULTHOOD

Middle adulthood refers to the people whom are experiencing changes and development in their central lives. It is basically about the midlife transition or the period of life beyond young adulthood but before the commencement of old age.

Physical Appearance

The changes in physical appearance are some of the most notable parts for many people as they experience middle adulthood physical development. Hair begins turning gray or white as teeth fade from white to yellow. More wrinkles appear, especially on the face, and skin begins to sag.

Hearing and Vision

The ability to hear high-pitched noises disappears during middle adulthood as most people begin recognising hearing loss around 40. Men experience twice as much hearing loss as women during this life stage. Vision also decreases for both sexes as their ability to focus declines, and they need brighter lights to see.

Health

This stage of development generally refers to the diseases experienced by the individuals and the diseases are few infectious yet more chronic. Heart diseases and cancer are the two most common sicknesses for people in midlife period. The experience of health decline is different for men and women. Men are more prone to heart disease, cancer and stroke especially on the incidence that men had experience or are experiencing divorce. For women, non-fatal illnesses like goiter, gout or arthritis and lung and breast cancer. Though death is fewer for females than in males, diabetic cases are inclined on the female's part more than the males. The gain or lost in this domain generally depends on how people take care of themselves while they are still young and capable to do so.

Strength and Coordination

As adults pass through middle adulthood their strength begins to diminish as some of their muscle is replaced with fat. Flexibility also decreases, and the reaction time of individuals in middle adulthood decreases as well.

Sexuality

The start of middle adulthood often signifies the end of a woman's ability to bear children. They proceed to go through menopause during this middle-age stage in their life. Men still possess the ability to reproduce although their fertility decreases in middle adulthood as they age.

Disease

Diabetes, heart disease and cancer are just a few of the common diseases discovered during middle adulthood. While chances are these diseases have been building up in an individual throughout their life, the discovery and treatment of them often occurs when people are in middle age.

Relationships during Middle Adulthood

During middle adulthood, the two primary long-term relationships characteristic are cohabitation and marriage. Cohabitors are unmarried people living together in a sexual relationship, often state their reason for cohabiting as either a trial for marriage or an alternative to marriage.

By middle age, most of the adults are married. Marital satisfaction is often described in terms of a U-curve: People generally affirm that their marriages are happiest during the early years, but not as happy during the middle years. Marital satisfaction then increases again in the later years, once finances have stabilised and parenting responsibilities have ended.

Divorce

Middle adults are not immune to problems in relationships. The reasons for dissolving a relationship are many and varied, just as relationships themselves differ in their make-up and dynamics. In some cases, the couple cannot handle an extended crisis. In other cases, the spouses change and grow in different directions. In still others, the spouses

Adulthood and Ageing

are completely incompatible from the very start. However, long-term relationships rarely end because of difficulties with just one of the partners. Both parties are usually responsible for the factors that may lead to a relationship's end, such as conflicts, problems, growing out of love, or empty-nest issues that arise after the last child leaves his or her parent's home.

Love changes over time, and such changes may become evident by middle adulthood. The ideal form of love in adulthood involves three components: passion, intimacy, and commitment—termed consummate love, or complete love. This variety of love is unselfish, devoted, and is most often associated with romantic relationships. Getting started is easy; sticking to it is much harder.

For many middle-aged couples, passion fades as intimacy and commitment build. In other words, many middle adults find themselves in a marriage typified by companionate love, which is both committed and intimate, but not passionate. Yet a relationship that has lost its sexual nature need not remain this way, nor do such changes necessitate the end of a long-term relationship. In fact, many middle adult couples find effective ways of improving their ability to communicate, increasing emotional intimacy, rekindling the fires of passion, and growing together. The understanding that evolves between two people over time can be striking.

Relationships that last

Long-term relationships share several factors, including both partners regarding the relationship as a long-term commitment; both verbally and physically expressing appreciation, admiration, and love; both offering emotional support to each other; and both considering the other as a best friend.

Essential to preserving a quality relationship is the couple's decision to practice effective communication. Communication is the means by which intimacy is established and nurtured within a relationship; it helps partners better relate to and understand each other. Communication helps them feel close, connected, and loved.

Friends

Friends offer support, direction, guidance, and a change of pace from usual routines. During this period, life responsibilities are at an all-time high, so having extra time for socialising is usually rare. For this reason, middle adults may have less friends than their newlywed and retired counterparts. Yet where quantity of friendships may be lacking, quality predominates. Some of the closest ties between friends are formed and nourished during middle adulthood.

Children

As adults wait later to marry and start families, more and more middle adults find themselves rearing small children. Middle adults and their adolescent children are both prone to emotional crises, which may occur at the same time. For adolescents, the crisis involves the search for identity; for middle adults, the search is for generativity. These two crises are not always compatible, as parents try to deal with their own issues as well as those of their adolescents.

Parents respond to their children's adolescence in different ways. Some middle adults attempt to live out their own youthful fantasies—sexual and otherwise—through their children. They may try to make their teenage children into improved versions of themselves. For example, some parents may force their teenagers to take music lessons or make them join a sports team, while other parents may insist that their children attend a certain college or enter the family business.

Witnessing their children on the verge of becoming adults can also trigger a midlife crisis for some middle adults. The adolescent journey into young adulthood is a reminder to middle-aged parents of their own ageing processes and inescapable settling into middle and later adulthood.

Middle-aged parents typically maintain close relationships with their grown up children who have left home. Many parents report feeling as if they continue to give more than receive from relationships with their children, including helping with their finances or watching their pets when they are out of town. Still, most middle adults and their grown children tend to value their time together, even as their respective roles continue to change.

Parents

Most middle adults characterise the relationship with their parents as affectionate. Indeed, a strong bond is often present between related middle and older adults. Although the majority of middle adults do not live with their parents, contacts are usually frequent and positive. And perhaps for the first time, middle adults are able to see their parents as the fallible human beings that they are.

One issue facing middle adults is that of caring for their ageing parents. In some cases, adults, who expected to spend their middle-age years traveling and enjoying their own children and grandchildren, instead find themselves taking care of their ailing parents. Some parents are completely independent of their adult children's support, while others are partially independent of their children; and still others are completely dependent.

Children of dependent parents may assist them financially (paying their bills), physically (bringing them into their homes and caring for them), and emotionally (as a source of human contact as the parents' social circle diminishes). Daughters and daughters-in-law are the most common caretakers of ageing parents and in-laws.

Even though the death of a parent is never welcome, some long-term adult caretakers express ambivalent feelings about the event. The grown children of parents dying of a lingering illness, for example, usually do not want to see their loved ones suffer—even if alleviation means death. These children may find themselves hoping simultaneously for a cure and for a peaceful release from the pain that their parent is experiencing.

4.5 AGEING ISSUES AND CHALLENGES IN LATE ADULTHOOD

Elder care can be thought of as an umbrella of care and services for the frail elderly. These include a broad range of services including: meals and socialisation, personal care, light housekeeping, residential facilities, and adult day care.

There are few physical differences among a group of first graders. But if you check out the same group 65 years later, their physical differences outnumber their similarities. Some will be the epitome of health, while others will be managing one or more chronic conditions. Some will be vigorous, while others will be lethargic.

As we get older, we become physically less like our peers. That's because we are the sum of our life experiences. At age six, not too much has happened to our bodies to make us radically different from our peers. But by middle and old age, we've had decades to develop and maintain habits that have an impact on our health, both negatively and positively.

Adulthood and Ageing

Ageing may be inevitable, but the rate of ageing is not. Why and how our bodies age is still largely a mystery, although we are learning more and more each year. Scientists do maintain, however, that chronological age has little bearing on biological age. The number of candles on your birthday cake merely serves as a marker of time; it says little about your health.

The human body goes through a variety of changes as it gets older. In general, muscles, blood vessels and other tissues lose their elasticity. The heart becomes less efficient, bones become weaker and the metabolism slows down.

In spite of the changes to the rest of the body, a lot of people focus primarily on changes to their appearance as they age. These include:

Wrinkles

Fibers in the skin called collagen and elastin break down and lose strength as a person gets older. Sun exposure throughout life contributes to this process. Without these fibers, the skin cannot hold its shape as well. Older skin retains less fat, making it look less supple. The pull of gravity also causes the skin to sag.

Dry skin

Older people produce less sweat and oil, causing their skin to be drier. Excessively dry skin can emphasise the appearance of wrinkles.

Age spots

Dark spots on the skin, particularly the arms, hands, face and feet, stem from cumulative exposure to the sun. Most people call these marks liver spots, but they are unrelated to liver function. They actually stem from overproduction of the pigment melanin in areas of the skin that have experienced the most exposure to the sun.

Obesity and Metabolic Syndrome

It is seen that most of the adults aged 60 and older are overweight or obese. Obesity is related to type 2 diabetes, cardiovascular disease, breast and colon cancer, gall bladder disease, and high blood pressure.

Women in perimenopause and menopause tend to accumulate fat around the waist and hips, and men get the gut. The food intake should be in check by reducing calorie intake and alcohol intake because a lot of alcohol calories go right to the gut. Also, increase in healthy fat intake such as omega-3 fatty acids and unsaturated fats, and eliminate trans fats completely. Foods sweetened with high-fructose corn syrup should be avoided. The common sweetener is found in everything from sodas to breakfast cereal to low-fat yogurt.

Arthritis

Arthritis affects nearly half the elderly population and is a leading cause of disability. The keys to prevention is to avoid overuse, do steady, regular exercise rather than in weekend spurts, and stop if you feel pain.

Managing one's weight is just as essential for joint health as cardiovascular health.

Osteoporosis and Falls

Osteoporosis and low bone mass affect most of the adults age 50 and older, most of them are women. According to the National Osteoporosis Association, osteoporosis is not part of normal ageing. Healthy behaviours and treatment, when appropriate, can

prevent or minimize the condition. Weight-bearing exercise also helps to keep bones healthy.

Cancer

Risk for developing most types of cancer increases with age. As women age, the rate of cervical cancer decreases, and endometrial cancer increases. The risk of prostate cancer increases with age, and black men have a higher rate than white men. Screening should start in your 40s, and at the very least should involve a digital rectal examination.

Lung cancer accounts for more deaths than breast cancer, prostate cancer, and colon cancer combined.

Vision and Hearing Loss

Age-related eye diseases such as macular degeneration, cataract, diabetic retinopathy, and glaucoma affects people aged 40 and older. Eating foods with high antioxidant content may be helpful in reducing vision loss due to macular degeneration. Regular eye exams should include screening for glaucoma, which is called “the sneak thief of sight” for the fact that the first symptom is vision loss. The disease can be arrested, but vision lost to glaucoma cannot be restored.

The incidence of hearing loss increases with age. Hearing loss takes a toll on the quality of life and can lead to depression and withdrawal from social activities. Although hearing aids can help, only one out of four people use them.

High-frequency hearing loss is common in old age and made worse by a lifestyle that includes exposure to loud sounds.

Mental Health: Memory and Emotional Well-being

Staying mentally active is as important as staying physically active. One of the perplexing problems of ageing is Alzheimer’s disease. Depression is often underdiagnosed and untreated. Many people mistakenly believe that depression is a natural condition of old age. One of the biggest life changes is retirement. Many people have their sense of worth tied up with work. In retirement, depression and suicide rates rise.

Self Assessment Questions

3) Fill in the blanks:

- i) Diabetes, _____ and cancer are common diseases discovered during middle adulthood.
- ii) _____ is often described in terms of a U-curve.
- iii) Passion fades as intimacy and _____ build.
- iv) Older skin retains _____ fat.
- v) In retirement, depression and _____ rates rise.

4) Answer the following statements with True or False:

- i) Men experience twice as much hearing loss as women during middle life stage.
- ii) Women are more prone to heart disease, cancer and stroke.

- iii) Long term relationship requires long term commitment.
- iv) Daughters and daughters-in-law are the most common caretakers of ageing parents and in-laws.
- v) Older people produce more of sweat and oil.

4.6 LET US SUM UP

The ageing process depends on a combination of both genetic and environmental factors. Recognising that every individual has his or her own unique genetic makeup and environment, which interact with each other, helps us understand why the ageing process can occur at such different rates in different people. Overall, genetic factors seem to be more powerful than environmental factors in determining the large differences among people in ageing and lifespan.

Ageing or aging is a process that accumulates changes in organisms or objects over time. Human ageing process involves multidimensional changes on physical, psychological, cultural and social levels.

Women are naturally obsessed with their looks and their world revolves around their looks and looks only. Ageing is an inevitable natural process and there is no treatment for ageing process. Although, it is true that women face much different challenges than men in ageing process, the key to fight ageing process in women, solely depends upon her perspective about life. If she decides to age gracefully, nothing can deter her from leading a beautiful life.

Menopause is the word that immediately comes to the mind when we say ageing process in women. The woman's life is divided into two phases premenopausal and postmenopausal. The hormonal changes in the body invite many ageing problems. The body starts losing out on bone mass and muscle strength.

During ageing process in women, their social life entirely depends upon their own attitude towards life and most importantly their health. Some women, due to their poor health or some other reason, may completely shut themselves away from the world.

Ageing, from the male perspective, is frequently associated with loss of physical and mental function and vitality. The implied stigma that comes with ageing often prevents men from dealing with important health issues associated with the process.

Prostate health is a consideration for men once they reach the age of 40. Over the age of 40, it is estimated that 60 percent of men will have an enlarged prostate (also known as BPH, benign prostatic hyperplasia).

Early adulthood is the stage of our life between the ages of about 20-40 years old, who are typically vibrant, active and healthy, and are focused on friendship, romance, child bearing and careers. Intimate interactions and relationships affect adaptations to the changing needs and stresses that evolve with each stage of development throughout one's lifetime. Intimate interactions from early life serve as the basis upon which relationships later in life are formed.

By middle age, most of the adults are married. Marital satisfaction is often described in terms of a U-curve: People generally affirm that their marriages are happiest during the early years, but not as happy during the middle years. Marital satisfaction then increases again in the later years, once finances have stabilised and parenting responsibilities have ended.

As we get older, we become physically less like our peers. That's because we are the sum of our life experiences. At age six, not too much has happened to our bodies to make us radically different from our peers. But by middle and old age, we've had decades to develop and maintain habits that have an impact on our health, both negatively and positively.

4.7 UNIT END QUESTIONS

- 1) Discuss the ageing process in humans.
- 2) Ageing process in male and female – discuss the differences.
- 3) What are the ageing issues and challenges in early adulthood?
- 4) Discuss the various types of illness one can suffer in middle adulthood.
- 5) What are the issues and challenges in late adulthood?

4.8 SUGGESTED READINGS

Stuart-Hamilton, Ian (2006). *The Psychology of Ageing: An Introduction*. London: Jessica Kingsley Publishers

Diane F. Gilmer; Aldwin, Carolyn M. (2003). *Health, Illness, and Pptimal Ageing: Biological and Psychosocial Perspectives*. Thousand Oaks: Sage Publications

4.9 ANSWER TO THE SELF ASSESSMENT QUESTIONS

- 1)
 - i) Multidimensional
 - ii) Antioxidants
 - iii) Dihydrotestosterone
 - iv) Intimacy
 - v) Osteoarthritis
- 2)
 - i) True
 - ii) True
 - iii) False
 - iv) False
 - v) True
- 3)
 - i) Heart disease
 - ii) Marital satisfaction
 - iii) Commitment
 - iv) Less
 - v) Suicide
- 4)
 - i) True
 - ii) False
 - iii) True
 - iv) True
 - v) False